

The Second Annual

Superintendent's Number

382 1/2

# THE CANDY MANUFACTURER

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Vol. III

JANUARY, 1923

No. 1



## *The Business of Manufacturing Candy* *on a basis of quality and volume production*

CANDY manufacturing as a science is more or less unknown, that is, most of us know how but too few of us know *why*, and one of the avenues to greater profits in the manufacture of candy is *knowing why*. The marked increase in the number of manufacturing confectioners who are employing laboratory service is evidence of the fact that we are progressing in the right direction toward knowing the "why" and "why not" of candy making and the standardization of raw materials through laboratory control.

Another set of profits is reserved for the manufacturing confectioners who are making careful study and application of better factory layouts and working conditions, better installation and machine efficiency, material handling, cost finding, foremanship training, and all problems of production and organization.

It is doubtful whether two per cent of the manufacturers in our industry have the same corresponding knowledge of their raw materials and are producing their goods (Continued on page 3)



# DELFT

## The World's Best Food Gelatine

---

HAROLD A. SINCLAIR, 160 Broadway, NEW YORK

---

*"Price is a relative term—Quality always a concrete fact"*

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COMPANY  
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88 Grey Nun St., Montreal, Can.

STOCKS  
EVERYWHERE

## The Big Idea Behind Delft Gelatine is Quality

The manufacturers of Delft Gelatine were convinced that the consuming trade would respond to their effort to make the best edible gelatine that science and skill could produce.

That they were right is proved by our rapidly increasing business. The consuming trade has learned that it pays to use Delft Gelatine, because it goes further and gives better results.

Its freedom from harmful and liquefying bacteria protects your products.

*We shall be glad to send you samples  
and quote prices.*

*Harold A. Sinclair*

## The Superintendent's Number



### *The Business of Manufacturing Candy* *on a basis of quality and volume production*

(Continued from Front Cover)

on the same corresponding standard of efficiency as Ward in making bread, Fairbank in making soap, Armour in packing meat or Schwab in making steel. The difference is in the number of thinkers. The candy industry needs more thinkers among its practical men.

The manufacture of candy on a scientific and efficient basis in volume production and the distribution of the manufactured products at a profit represent the vital interests and everyday problems of our subscribers and also represent the viewpoint and field to which this magazine is devoted exclusively.

We would like to meet more of the thinkers of the candy industry this year and to have their close co-operation in presenting through the medium of this magazine the most advanced and constructive thought on all phases of candy factory management.

We want to always maintain a direct and positive contact with the purchasing, production and sales departments of every wholesale manufacturing confectioner in America.

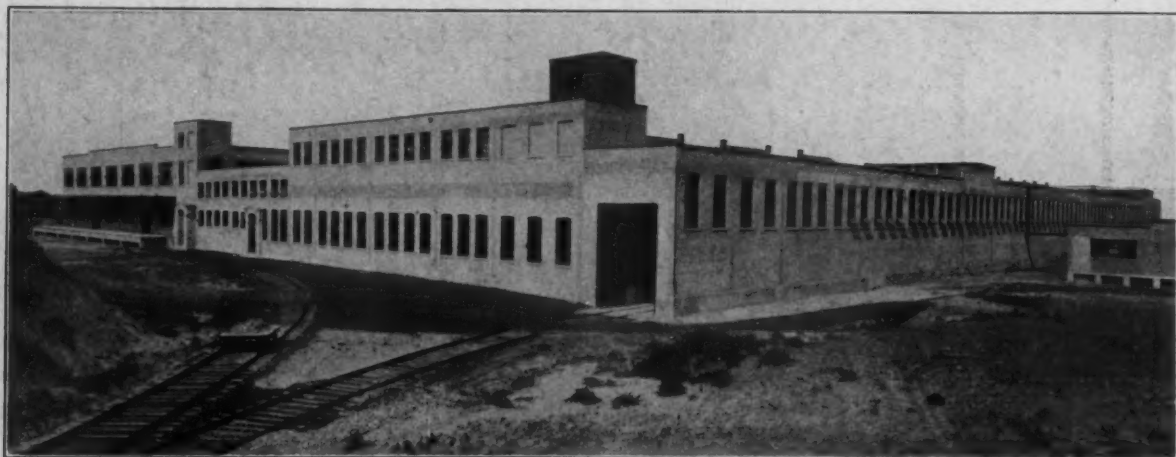
THE CANDY MANUFACTURER PUBLISHING CO.

(If you like this issue, kindly  
tell us why, and if not, why not)

*Earl T. Allard*  
President-  
Publisher



# "U. S. GEL"



□ □ □ WORLD'S LARGEST INDIVIDUAL GELATINE FACTORY □ □ □

## UNITED STATES GELATINE CO.

MILWAUKEE, WIS.

**U.S.** Gelatine is produced in the World's Largest Gelatine Factory, which means Uniformity, Purity, Strength at the Right Price. Stock used in the manufacture assures a bright, clean, odorless Gelatine.

□ □ □ LET US SEND YOU SAMPLES AND QUOTE ON YOUR REQUIREMENTS □ □ □







Members: National Confectioners' Association, Midland Club, Chicago Association of Commerce.

# The Candy Manufacturer

Registered, U. S. Patent Office

"READ WHEREVER GOOD CANDY IS MADE"

*A Specialized Technical and Commercial Magazine for Confectionery Superintendents, Purchasing Agents and Executives*

Contents Copyrighted 1922, Earl R. Allured

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Superintendents

Vol. III

JANUARY, 1923

No. 1

## PURPOSE

The purpose of THE CANDY MANUFACTURER is to provide a medium of constructive service and communication between manufacturing confectioners exclusively, a high-class specialized business magazine devoted to the problems and interests incident to the manufacture of confections and the management of a candy factory.

## POLICY

THE CANDY MANUFACTURER, being a highly specialized publication, is edited in the interest of the executive, the purchasing, production and sales departments exclusively, and provides a medium for the free and frank discussion of manufacturing policies and problems, methods and materials.

The same corresponding policy applies to the advertising pages which are available only to the supply manufacturers for the advertising of products which are used by the manufacturing confectioner—machinery, raw materials and factory supplies, etc.

### The Candy Manufacturer believes in

**A Technical Candy School** with resident and extension courses for factory superintendents and journeymen candy makers.

**Pure Food Legislation** which enforces a quality standard for confectionery.

**Rigid Inspection** of candy factories to enforce sanitation and working conditions necessary for the production of a pure food product.

**Maximum Production** from each production unit of a candy factory and a clearing house of production records.

**Uniform Method** of cost finding and accounting.

**An Annual Exposition of Confectioners' Supplies** and equipment under direction of (not merely endorsed by) The National Confectioners' Association.





# *Inspection!*

When your confections are opened for inspection they must win through *appearance* and *accent of flavor*.

## IDEAL Capital Vanilla Coating

on any number secures immediate appreciation. It has an intense chocolate character, strongly aromatic of Vanilla. Smooth in texture, splendid in appearance, easily hand or machine dipped, no better coating of this nature is manufactured.

IDEAL Capital Vanilla is but one of a complete line of Coatings and Liquors. No matter what your requirement some IDEAL number will meet it. Our experts are always ready to help you with any specific problem. Samples gladly supplied. Drop us a line today.

*"Ideal Once—Ideal Always"*

**IDEAL COCOA & CHOCOLATE CO.**

39-43 PARK PLACE, NEW YORK

MILLS, LITITZ, PENN.

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660.5  
v. 3

## The Candy Manufacturer's Approved Advertising of Confectioners' Machinery and Supplies

and Miscellaneous Advertising Directed to  
Manufacturing Confectioners'

**POLICY:** THE CANDY MANUFACTURER is essentially a manufacturers' publication and therefore is a logical advertising medium only for confectioners' supplies and equipment. The advertising pages of THE CANDY MANUFACTURER are open only for messages regarding reputable products or propositions of which the manufacturers of confectionery and chocolate are logical buyers.

This policy **EXCLUDES** advertising directed to the distributors of confectionery, the soda fountain and ice cream trade. The advertisements in THE CANDY MANUFACTURER are presented herewith with our recommendation. The machinery equipment and supplies advertised in this magazine, to the best of our knowledge, possess merit worthy of your careful consideration.

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# Chocolates are only as good as their Coatings

It's the **coating** that counts in candy-making.

The **coating** is the first thing the candy lover sees and tastes of your chocolates.

The **COATING** makes or breaks you with your public.

Runkels are making the coatings for leading quality brands. Runkels are ready to submit samples and prices without obligating you to buy.

Write

## Runkel Brothers, Inc.

Manufacturers of

"The Cocoa with that Chocolatey Taste"

451 West 30th Street

NEW YORK

CHICAGO

PHILADELPHIA



# \$750 Advertising Order Refused

MacRobertson of Melbourne, Australia, ordered four pages of advertising space to appear in three consecutive issues of *The Candy Manufacturer* as per following letter recently received:

*MacRobertson*

The Candy Manufacturer,  
1120 Stock Exchange Building,  
Chicago, Illinois, U. S. A.

Fitzroy, Melbourne, Oct. 25, 1922.

Gentlemen:

We are anxious to take four full pages in your periodical for three issues, in order to give the American trade some idea of the magnitude of our business in this country. With this end in view, we are forwarding you five photographs which we would like reproduced on the pages in question, using the following copy:

(Copy instructions omitted.)

Our reason for desiring publicity in your Journal is because of the fact that we are keen that American manufacturers should become acquainted with us through your journal. Our name is well-known in many quarters in America, but the importance of our business and the magnitude of the industry might not be known to everyone in the American trade. The publishing of this advertisement should result in the opening up of business relations with many suppliers of raw materials, etc., and it should be, therefore, mutually advantageous for America and Australia.

We desire to compliment you on the excellence of your periodical. I was much taken with the general tone and utility of the paper, and was about to make arrangements for a subscription when word came to Melbourne that Mr. Weiscopf had been good enough to subscribe on Mr. Atkinson's behalf. The writer has been a subscriber to all the leading American trade journals for many years past and the idea of devoting yourself entirely to manufacturing problems is certainly very appealing.

For your information, we would state that this business was founded 42 years ago in the humblest circumstances by the writer. Today we employ 2,000 operatives with an annual wage bill of over £350,000. We are capitalized for a million and a half pounds sterling, and our products are known right throughout this country. These figures will give some idea of the magnitude of our enterprise. This is the largest "one-man" business in Australia. We make 700 lines of chocolate, French and general confectionery, and are constantly adding to our varieties.

In view of the fact that we are giving you four pages of advertisements in three issues of your paper, we would be glad if you would give us some editorial mention, and we are enclosing with this letter two issues of "Smith's Weekly" (a Sydney newspaper), and one issue of the Melbourne "Herald." The articles which are marked in red ink will give some idea of our position in industrial activities in Australia. When you consider that we had only a population of one million people to work upon for twenty years and five millions to work upon for the last twenty-two years, the immensity of our undertaking is probably unsurpassed by any other industry in any part of the world—on a population basis.

Yours faithfully,

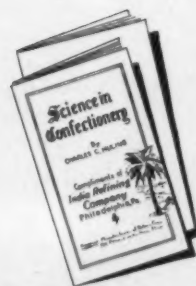
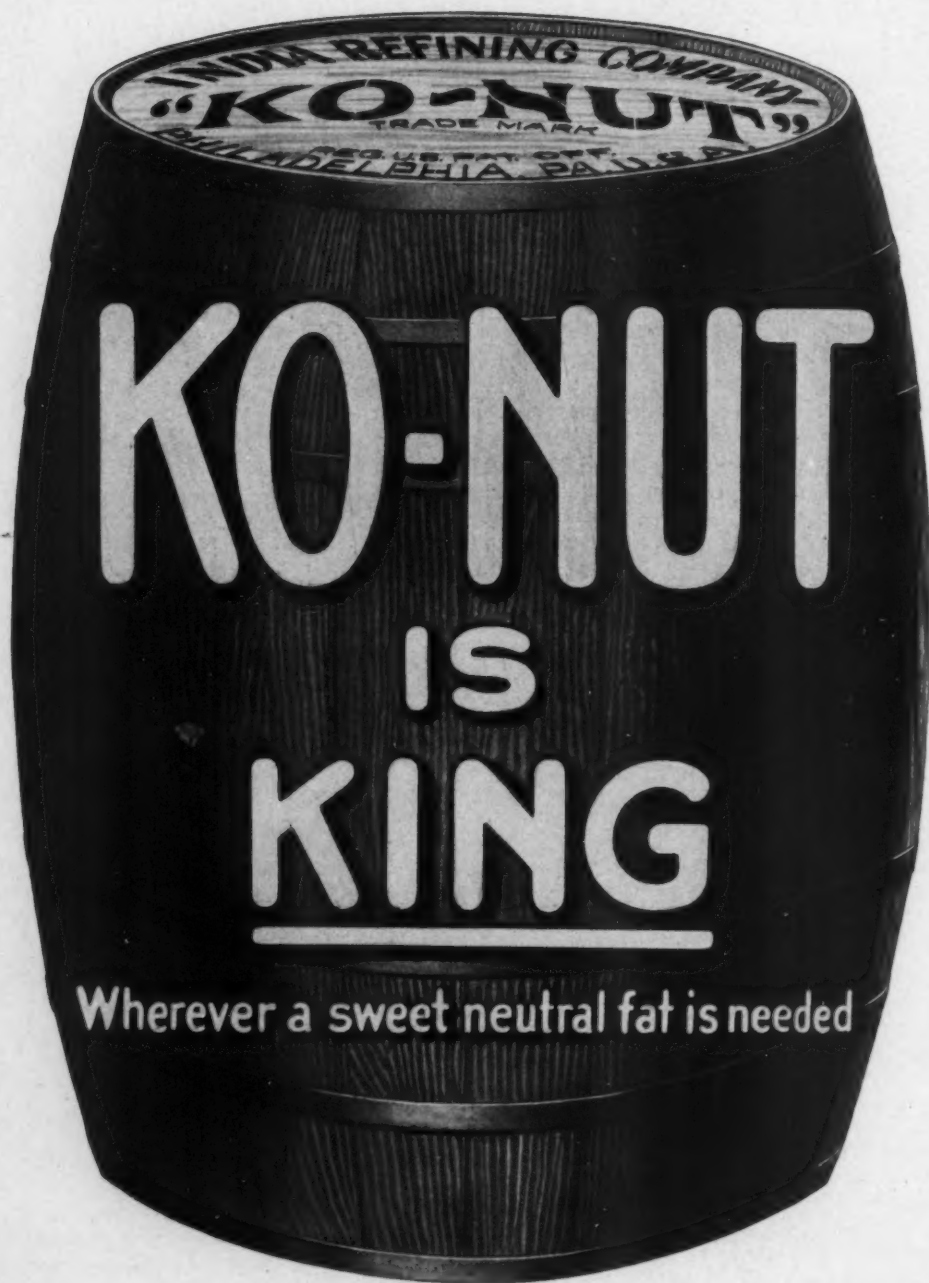
*MacRobertson*

Our subscribers in America understand our policy—that the advertising pages of this magazine are available *only* for the supply manufacturers (candy machinery, raw materials and factory supplies)—and that we do not solicit or accept advertising from manufacturing confectioners. Therefore, we are publishing MacRobertson's letter so that our readers will understand the motive which prompted the above order. Of course, we were glad to use the photographs and the write-up because of its news value. It appears in this issue.

This letter from MacRobertson is tangible evidence that the foreign manufacturing confectioners also recognize and appreciate that THE CANDY MANUFACTURER is the only technical and scientific publication in the world devoted exclusively to the manufacturers of candy and chocolate and that it is recognized as the direct connection between the confectionery supply manufacturer and the candy manufacturers. We would like to hear from more of our foreign subscribers.

THE CANDY MANUFACTURING PUB. CO.

*These Sovereigns*

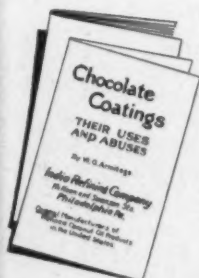


Let us send you copies of these booklets.

INDIA REFINING COMPANY

McKeen and Swanson Streets  
PHILADELPHIA, PA.

Will Always Reign



They will be sent without charge upon request.

INDIA REFINING COMPANY

McKeen and Swanson Streets  
PHILADELPHIA, PA.



SENNEFF-HERR Candy Maker's Specialties are of "Sterling" Quality

# Controlling Quality and Uniformity

A Message to Candy Superintendents on the subject of maintaining quality standards in finished goods and their relation to candy profits

by C. W. Senneff

President Senneff-Herr Company

## A Successful Confection

THE acid test of whether any commodity is a sales success or not is its ability to prompt unsolicited repeat orders. A repeat order from a dealer or jobber is prima facie evidence that the goods have the merit to sell and stay sold.

Every superintendent appreciates the fact that if he is expected to produce quality candies and maintain a uniform quality standard, he must standardize two things—materials and methods of handling them.

The latter is easily controlled and if the purchasing department is in perfect co-ordination with the production department, the superintendent will get uniform supplies.

The purchasing agent will regard the policies, reputation and ability of the supply manufacturer to furnish uniform goods of standardized quality of equal importance and significance in directing his purchases as the merits of the merchandise itself.

## Quality Insurance

Manufacturing confectioners who use *Senneff-Herr's Sterling Brand Specialties* for the foundation of their lines are sure of both quality and uniformity in these products.

Furthermore, they have the advantage of a service on the practical handling of these products in the manufacture of candy from an organization of practical candy makers who are always "on their toes" and on the lookout to take advantage of any possible improvement in the quality of their products or new methods of using them in the development of candies which are profit producers for the confectioner.

Sterling Brand Products are maintaining the quality and uniformity, and consequently the sales stability, of many of the foremost confectionery lines in America. They are made and developed by men who understand candy making by virtue of their years in the school of practical experience.

We have a great deal in common with the candy superintendents and working foremen and we will appreciate the opportunity of at least discussing with you your problems and sending you a working sample of *Sterling Products*. Kindly use the coupon on opposite page, or your letterhead.



# The Senneff-Herr Line

## of Sterling Quality Candy Makers' Specialties

### Egg O Creme

*"The Best for Cream Centers"*

Makes a soft, snowy-white, velvety and creamy starch mold center that ripens ready for the market in a very few days.

Also a center that is easy to dip with a small percentage of coating, on account of a smooth, firm crust and the absence of starch.

### Ripe Creme

Ripe Creme will make a little lighter weight and a fluffier center than Egg O Creme, but both will make a nice, smooth, flowing center when made according to our formulas.

### X-L Cream Caramel Paste

*"The Richest of Richest"*

X-L CREAM CARAMEL PASTE stands alone in its class and certainly does make a caramel that will stand alone.

We have spared no pains nor expense in working out this High Grade Article that has made so many friends among the Candy Makers, who put QUALITY FIRST.

We guarantee X-L CREAM CARAMEL PASTE not to turn rancid, sour nor curdle.

It makes a caramel as smooth as one made from pure sweet cream at LESS COST and has a richness of flavor that is true to its name. It EXCELS.

X-L CREAM CARAMEL PASTE is another of Senneff's "Big 3."

### Dipping Caramel Paste

There has been a large demand from numerous manufacturers for a medium-priced Caramel Paste to use in making a chocolate dipped caramel, as they do not require the standing qualities obtained in using our famous X-L Brand.

Try out a few of the tested proven formulas in The Candy Maker's Guide—

Your copy will be mailed gratis, on request

We have succeeded in meeting this demand with our DIPPING CARAMEL PASTE, which makes a very rich, soft, smooth, chewing caramel at a low cost, quality considered.

### Nougat Whip

*"None Better"*

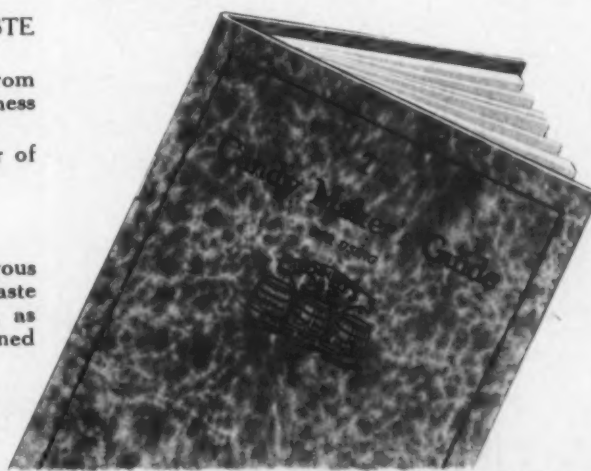
NOUGAT WHIP has them all whipped. It is monarch of them all in quality, lightness, smoothness and flavor. It will go further, make fluffier candy and hold moisture better than anything on the market that is being used for the same purpose.

Our NOUGAT WHIP is made from pure Hen Egg Albumen. IT IS ABSOLUTELY FREE FROM SUBSTITUTES.

NOUGAT WHIP belongs to Senneff's "Big 3" family.

### Special Nougat

In order to meet the demand for two grades of Nougat Creme we are making one under the above name which is second to none save our famous NOUGAT WHIP.



SENNEFF-HERR COMPANY, Sterling, Ill.

You may send a copy of your Candy Maker's Guide—without obligation.

Name.....

Per.....

Address.....

# Ring out the old— Ring in the new—



As the "skirts of the departing year" disappear into yesterday's ten thousand years, every thinking man holds an inventory.

First he goes over the Old Year personally—remembers the success and happiness it has brought.

Then bright and early January 2nd, he begins his business inventory—what has he made—what has he built in the way of prestige—where have his methods fallen short—what products have been winners.

It is this taking stock, finding out just where he stands—that helps a man and a business to progress, to go forward.

Every sign pointing towards 1923 is a good sign—for a prosperous year.

Resolve to keep up standards—to make Quality paramount, and nothing can keep Prosperity from your door.

Nucoa Products are ready to back up your New Year's Resolutions for Quality 100%. They've been making prosperous New Years for more than a quarter of a century.



## THE NUCOA BUTTER CO.

### NUCOA

—The hard butter for those shiny, satiny chocolates, caramels, etc.

### Makers of NUCOLINE

—A soft butter which insures those salted nuts that don't turn rancid.

### PLASTIC NUCOLINE

—A filler for those delicate "spun-gold" wafers with the ice-creamy filling.

Refinery Sales Department

Nucoa Building, 4th Avenue at 23rd Street, New York

Complete warehouse stocks maintained at principal distributing centers.



# Men who represent

## *White-Stokes*

are not merely salesmen—they are purveyors of ideas and representatives of service. We are confident that time given to them by a superintendent is time well spent.

A White-Stokes man may have just the idea you've been looking for to put over a really big thing. Let him talk to you.

### WHITE-STOKES CO., Inc.

3615-23 Jasper Place  
CHICAGO, ILL.

253 36th Street  
BROOKLYN, N. Y.

Manufacturers of

FONDAX

P. K. K.

MAZETTA CREME

JERSEY CARAMEL CREME

And Other Specialties for the Candy Manufacturer



# Flavor Value

---

Value is not composed of a single element; mathematically speaking, it is a function of both price and quality; it can only be computed on the basis of price paid and quality received.

The wise buyer of flavoring ingredients confines his purchases rigidly to sources of supply which guarantee him the maximum return in value, the most economical co-ordination of price and quality.

Flavoring materials recommended by the House of Ungerer meet this requirement to the complete satisfaction of the most exacting purchaser.

We urge exhaustive test of our

## OZONE-VANILLIN

OIL PEPPERMINT

OIL WINTERGREEN

OIL ORANGE ITALIAN

OIL ORANGE WEST INDIAN

OIL LEMON SUPERFINE

SIMILE FRUIT ESSENCES

NATURAL FRUIT FLAVORS

CONFECTIONERS' FLORAL FLAVORS

---

*"Our Quality Is Always Higher Than Our Price"*

---

## UNGERER & CO., New York

124 West Nineteenth Street

CHICAGO  
189 No. Clark Street

PARIS, FRANCE  
11 Rue Vezelay







---

Nulomoline for Better Candy

---



*Nulomoline makes  
Candies that keep.*  
P.S.

## A Booker Process Cream

formula controlled by

The Nulomoline Company

New York

::

Chicago

::

Boston

---

## A BOOKER PROCESS CREAM

**I**LLUSTRATED on the opposite page is a flowing cream made by our patent Booker Process. This process is one of the products of our Service Department, which is maintained for the benefit of our customers.

The inversion of sugar is an important factor in the manufacture of candy, and is usually obtained before coating the goods. The Booker Process makes it possible to secure any desired degree of inversion after the centers are under chocolate.

Our chemists tested goods made by this patent process and found a gain in inverted sugar of 20% in a period of two and a half months. There was a gradual breaking up of the sugars extending over that period which resulted in a gradual softening of the center. This change in the center was apparent within two days from the time the goods were made, showing that the process sweats the center quickly.

Tests made of other centers showed only a slight change in their chemical combination, the gain being less than 2% of inverted sugar.

Since the presence of inverted sugar insures the life of the center, the above tests clearly demonstrate the advantage of the Booker Process.

There is another advantage in our process. All of the small leaks are sealed. When the syrup comes in contact with the air, it hardens, forming a coating that is as effective, so far as moisture-retaining is concerned, as the chocolate itself. We have seen a center that had a very bad leak. One half of the center was hard, the other half remaining so soft that it flowed. The sealing of the goods in this manner effects a saving by materially reducing the amount of goods lost by poor dipping.

The practical man often finds that the scientific combinations suggested by chemists have to be overhauled in order to make them work under factory conditions. As the Booker Process has been worked out under the direction of a candy maker, you will find that formulas we furnish are practical, and the method of working simple.

*All formulas and information sent without obligation*

M-1      Service Dept. THE NULOMOLINE CO., 109-111 Wall Street, New York, N. Y.

*Please send me your formulas for  
(Check those desired)*

Nougat	<input type="checkbox"/>	Cast Creams	<input type="checkbox"/>	Name _____
Caramels	<input type="checkbox"/>	Hand Rolled Creams	<input type="checkbox"/>	Position _____
Fudge	<input type="checkbox"/>	Hard Candy	<input type="checkbox"/>	Firm _____
Marshmallow	<input type="checkbox"/>	Coconut Work	<input type="checkbox"/>	Street and No. _____
Jellies	<input type="checkbox"/>	Bon-Bons	<input type="checkbox"/>	City and State _____









**BETTER**  
**MARSHMALLOWS**

**To Candy Superintendents:**

Veg-Jell has been tested in every conceivable way by some of the largest manufacturers of quality marshmallows in this country and found to possess superior merit on every desirable point. We are prepared to send you details on these tests on request.

Let us send you tested formulas and full information  
about the handling of

## VEG-JELL

the vegetable gelatine that makes better marshmallows

**Veg-Jell** is a pure vegetable gelatin which, when used in proper proportion with animal gelatin, will produce a short, tender, uniform marshmallow with more flavor and greater moisture-retaining and keeping qualities.

No change necessary in your formula or method of manufacture.

**Veg-Jell** will reduce your gelatin costs from 15 to 20% and actually increase your quality.

These statements about **Veg-Jell** are based upon actual results which have been obtained by manu-

facturers of quality marshmallows with a national reputation to maintain.

Our demonstrations of **Veg-Jell** have stood the test of time and closest scrutiny of some of the foremost manufacturing confectioners in United States the past year.

May we send you full information regarding **Veg-Jell**, including the tested formulas and all details of handling the product in your factory. **Veg-Jell** will produce a superior marshmallow and actually reduce your costs.

**Stein Hall Mfg., Co.**  
Chicago, Illinois

**Stein, Hall & Co., Inc.**  
New York, N. Y.



# ATLANTIC

—the super-clarified

## GELATINE



**F**OR more than two years we have been constantly at work in our laboratories striving to develop a process which would mean greater purity, greater clarity, for Atlantic Gelatine. And now our months of ceaseless efforts and experiments have resulted in a super-clarified gelatine so pure—so clear—that you will admit these features the moment you see Atlantic in solution.

### Atlantic Fears No Pure-Food Legislation

But super-clarity, even with our special process, would have been impossible were it not for the fact that the raw materials used in Atlantic are finer than those used in the making of most gelatine. That is why Atlantic Gelatine passes the pure-food requirements of any state in the Union—even Pennsylvania and North Dakota.

Not only is the superior quality of this super-clarified gelatine to your advantage, but likewise is there a greater economy in the use of Atlantic. Grade for grade, it costs less than others and does more.

### Make Us Prove Its Merits

Send for a barrel of Atlantic Gelatine today. Use five, ten, or even fifteen pounds. If, after a fair test, you decide that Atlantic isn't your gelatine, send back the unused portion and we will pay freight both ways.

That's how sure we feel when we make the statement that Atlantic—the super-clarified gelatine—is a better gelatine and will save you money.

**ATLANTIC GELATINE COMPANY**  
Woburn, Mass.

— BRANCHES —

NEW YORK CITY	BALTIMORE	CHICAGO
Room 1081, Woolworth Bldg.	1012 Union Trust Bldg.	Suite 510, 118 N. La Salle St.
SAN FRANCISCO		
Room 240 Hansford Block, 268 Market St.		

# Among Our Specialties Are:

## AVIZOL

The dryer and bleacher for hard candy, gum work, etc. Our successful specialty for over twenty years.

## EGG ALBUMEN

Our own importation. Good beating quality guaranteed. New crop goods.

## FRUIT FLAVORS

Raspberry, Strawberry, Wild Cherry and Grape. No ethers, fruit base highly concentrated. For hard candy or creams.

## HOREHOUND PASTE

Horehound leaves (no stems) reduced to paste form. Easy to use, finest flavor, dryest candy.

## SLAB DRESSING

Odorless, tasteless, colorless mineral oil (same as sold in drug stores) for greasing slabs and moulds. Will never grow rancid.

## WHITE LAC VARNISH

Made from arsenic-free and rosin-free, bleached shellac and tax-paid grain alcohol. For glazing fudge, burnt almonds, etc.

## VEGPARA

Cottonseed oil stearine in flake form having a melting point of 150 deg. Fahr. Used in fudge, salt water kisses, nougat, molasses taffy, caramels, etc., and to harden cocoa butter for chocolate work for snappy, brittle chocolate coating.

*Liberal samples of any of the above with directions can be had for the asking.*



**O. J. WEEKS CO., Inc.**

385 Washington Street

NEW YORK, N. Y.

**Ucopic**

**Pure Food**

**Gelatine**

**“Not Hard to Take”**

Are you prepared to get your share of the increased volume of business available this year with products of exceptional quality?

One sure way to better your marshmallow pieces is to adopt UCOPCO Pure Food Gelatine.

UCOPCO is a certain volume producer—a flavor and moisture retainer—and will give you the meaty, tender marshmallow that will assure popularity and demand for your brand.

Don't overlook this sure bet.

Any of the offices listed below can supply you with samples and further money-making information.

**United Chemical & Organic Products Co.**  
 Home Offices: 4200 S. Marshfield Avenue, Chicago

Branches:  
 New York City    New Orleans    San Francisco  
 Milwaukee    Detroit

**Ucopic Pure Food Gelatine**



# Essential Oils, Fruit Flavor Bases, Cumarin and Vanillin

Seasonable Offerings:

**Oil Peppermint, Guaranteed Absolutely Pure and of Finest Flavor**

**Oil Lemon and Sweet Orange, F. B., Handpressed  
of Unexcelled Quality**

## Hard Candy Flavors

APPLE  
BANANA  
BLACKBERRY  
CHERRY (with Pit Flavor)  
CHERRY (without Pit Flavor)  
CHERRY, Wild  
CURRANT, Black

CURRANT, Red  
GOOSEBERRY  
GRAPE  
HONEY  
LOGANBERRY  
PEACH  
PEAR

PINEAPPLE  
RASPBERRY  
ROSE  
STRAWBERRY  
STRAWBERRY, Preserved  
VIOLET

**T**HE reception accorded to this new group, which we placed on the market only a short time ago, has been gratifying and supports all we claim for them. These flavors are of the highest concentration, have the delicious aroma of the fruit itself and have been manufactured with a special view to permanence and **TO WITHSTAND CONSIDERABLE HEAT.** In addition to the large

amount of natural extractive matter from the fruits present, the Flavors contain sufficient Ethers, Esters, Vegetable Tinctures, etc., to provide the necessary strength and impart the special characteristics necessary and claimed for this group.

For all other kinds of confectionery, particularly cream work, the following groups have been successfully employed:

## TRUE FRUIT AROMA ESSENCES

Extra Concentrated

which represent nothing but the extractive matter of **SOUND, RIPE FRUIT;** and our

## FRITZBRO-AROMES

which are the **IDEAL FLAVORS OF HIGHEST CONCENTRATION,** based on Fruit Extractions and fortified with other harmless ingredients to accentuate the **SPECIAL CHARACTERISTICS** of the respective fruit.

With these lines, you can solve **ANY PROBLEM** of flavoring candies, of whatever kind they may be. Samples and further details will be cheerfully furnished upon application.

# Fritzsche Brothers, Inc., New York

Chicago Branch: 33-35 West Kinzie Street

# Something Better in Colors and Flavors

---

"Atlas Brand" Colors and Flavors offer to the Confectioner the strongest and most brilliant colors and the most delicate and delightful flavors. In fact their unusually high quality has made them the standard for many of the country's leading candy manufacturers.

---

## "Atlas Brand" Colors (all shades)

Certified Combination Colors  
Certified Primary Colors  
Certified Paste Colors  
Vegetable Dry Colors  
Vegetable Paste Colors  
Atlas Carmine No. 40

## "Atlas Brand" Flavors and Extracts

Genuine True Fruit Flavors  
Imitation Fruit Flavors  
Conc. Imitation Fruit Flavors  
Pure Vanilla Extracts  
Imitation Vanilla Flavors  
Maple Flavors

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**"First producers of Certified Colors"**

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## H. KOHNSTAMM & CO., Inc.

Established 1851

NEW YORK  
83-93 Park Place

CHICAGO  
11-13 E. Illinois Street

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*A trial quantity of "Atlas Brand" Colors or Flavors will be gladly sent on request with the understanding they must satisfy you, otherwise they may be returned at our expense.*

BIRDSEYE VIEW  
MAIN OFFICE and WORKS

ASH GROVE, HACKNEY,  
LONDON, E. 8.

Factories at  
Hackney, London    Messina, Sicily  
England            Italy  
Mitchem, Surrey    Grasse, France

Offices and Warehouses  
New York, Chicago, Montreal,  
Toronto, Paris

We would like to send you working samples of

# FRUIT FLAVORS

The following are specially worthy of your consideration:

BUTTER,  
CHERRY  
WILD CHERRY  
HONEY  
MAPLE  
MARASCHINO  
PEACH  
PINEAPPLE  
RASPBERRY  
ROMAN PUNCH

Have you seen our CONFECTIONERS' ORANGE PASTE  
made from ripe Californian oranges?  
An ideal flavor for cream centers, etc.

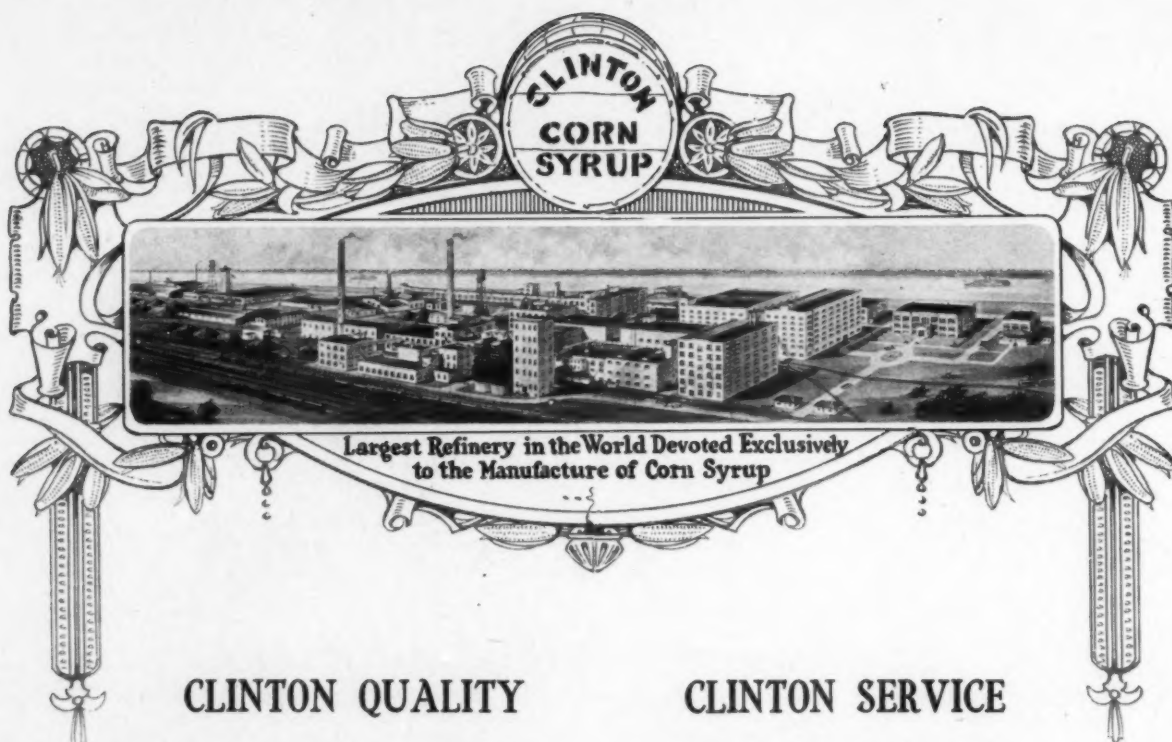
## W. J. BUSH & COMPANY, Inc.

370 Seventh Avenue, NEW YORK CITY, N. Y.

54 W. Lake Street, CHICAGO

70 Kilby Street, BOSTON

*Manufacturers of Fruit Flavors, Food Colors and Distillers of Essential Oils.*



## CLINTON QUALITY

**CLINTON** Confectioners' Corn Syrup is made to meet the most diversified requirements for a corn syrup that will work equally well in all departments whether for cream work, gum work, chewing candies, or high cooked candies. It runs extremely constant in gravity, strength, and purity and can always be depended upon to give uniform and satisfactory results.

## CLINTON SERVICE

**CLINTON** Service includes among other things the facilities of our chemical and bacteriological laboratories and the aid of our experts in solving the technical difficulties and operating problems which at times confront the candy manufacturer. We are always glad to make analytical tests and give any information or suggestion which is within our power.

*May we send you our Illustrated Booklet  
on "How Clinton Corn Syrup is Made"*

**Clinton Corn Syrup  
Refining Company**  
**CLINTON, IOWA**

CLINTON CORN SYRUP



# Co-operative Advertising Campaign for the Candy Industry



by V. L. Price

Director of Publicity, National Confectioners' Association

**A**S this issue was going to press we received a seven-page manuscript from V. L. Price on the above subject, which necessarily had to be condensed to fit the available space in this issue. We have had to omit some very interesting details of the definite results which have been obtained by many co-operative campaigns which have a bearing on the success which may be expected from a national campaign by the candy industry.

However, we are all more or less familiar with the success of the co-operative campaigns by the lemon industry, toy industry, saving accounts, coffee industry, orange industry, walnut growers, raisin growers, safety first campaigns and others.

Quoting from Mr. Price's article:

"Inasmuch as the candy industry has entered upon a co-operative or industrial campaign it is interesting to note the general conditions which have brought about industrial or association advertising; why other industries have begun this co-operative advertising and what co-operative advertising has accomplished for these industries. In this article we wish to briefly discuss the things mentioned above and their application to the candy industry.

## **Fundamental Conditions in Co-operative Advertising**

All of the industrial advertising campaigns which we have analyzed, and there were over 200, were brought about by three things:

First—Conditions within the industry.

Second—Conditions without the industry, or so-called competitive products competition.

Third—The desire for increased consumption, which means increased sales.

### **Conditions Within the Industry**

In every industry there was found to be many difficult and common problems, legal, manufacturing, etc., but inasmuch as we are concerned primarily in this discussion with the sales features, let us deal with this side of the

question only. The industry was handicapped by those companies who either through lack of knowledge, inexperience, or with bad intent, were using the wrong merchandising methods. By education this condition was greatly improved. As a result of co-operative action, many unfavorable conditions were remedied; the membership was made more solid and began working in greater harmony as a result of co-operative advertising.

### **Conditions Without the Industry, or So-Called Competitive Products Competition**

This very interesting item recently appeared in a publication:

*'In recent years the jewelers, the florists and the art and gift shops have crowded the thought of writing paper as an appropriate gift out of the public mind.'*

The above may seem to you of no interest in connection with the candy industry; however, suppose you were to read as follows:

*'In future years the jewelers, the florists, the manufacturers of soft drinks, fruit and nut growers and the art and gift shops will crowd out by more aggressive methods the giving of candy for gift purposes and the general consumption of candy unless the candy industry as a whole keeps before the public eye the giving and suggestive uses of candy.'*

In other words, the condition of mass action, which we mentioned earlier in this article, has brought about a new condition in competition and awakened the present generation of business men to the fact that there is not only competition within an industry, but very strenuous and dangerous competition in other industries as a whole. Competition has now become a struggle between the resources and brains of these larger groups.

### **Increased Consumption**

Much is to be gained by the confectionery industry in a co-operative advertising campaign. If our membership becomes greater and more solid with the retailers, jobbers and the

manufacturers working more in harmony, it will benefit all concerned, and with improved merchandising methods each one will benefit from the progress each one makes. In other words, as the standards, practices and volume of business of the industry are raised, so will the conditions of each unit of the industry improve. The candy industry has its competitive products competition, as have other industries. We are losing sales to the advertisers of flowers, books, jewelry, soft drinks, fancy cakes and other bakery products, chocolate coated ice cream, raisins, etc., against which we must protect and fortify ourselves.

You well know the condition of over-production, both in the number of companies and by the quantities of goods which are able to be produced within the industry. In connection with over-production we can do one of three things:

First—Go along as we are, in which case the law of the survival of the fittest will become active, in which case by the process of elimination many in the candy business will be forced out.

Second—The introduction of bad business practices which cannot be checked except by agreement, which would involve the industry in legal difficulties if it attempted to regulate prices and production in any way.

Third—By stimulating the consumption of candy we can make more business for everybody and can assure the profitable existence of more of those engaged in the confectionery industry.

Certainly the first two methods are not to be considered, and our recourse is to make more candy business.

#### **How Can We Increase Candy Consumption by National Advertising**

First—By establishing broader and stronger buying habits among the people.

Second—By providing an extra reminder and suggestion to buy candy, increasing impulse purchases.

Third—By educating minds prejudiced against candy to the food value of candy.

Fourth—By educating people to broader uses in the home for candy, such as making desserts, for guests at teas, card parties, etc.

Fifth—By increasing the use of candy for sentimental purposes, such as gifts for different occasions.

Sixth—By educating retailers of candy to be better merchandisers.

Seventh—By promoting the established holidays as bigger candy-buying days.

We have started along the road of increasing candy consumption by the selection of our slogan and its introduction to the industry; by writing educational articles for the retailer and by providing the retailer with window posters, which will help him sell more candy.

Several of the aims outlined above are possible only through general advertising, but as we have said, this cannot be done until our foundation is completed. In the meanwhile it is to the interest of every individual manufacturer to put his shoulder to the wheel in the program which we have already started until the time when we are prepared to go into general publicity. When that time comes the industry will not have much patience with the man who is not in favor of co-operative advertising if he criticizes the co-operative advertising campaign, when he has not even tried out the advantages by co-operating with the publicity department in its present plan.

After you read of the results obtained by others through co-operative advertising, you may judge what results may be reasonably expected from an advertising campaign by the candy industry. These figures are assuring and should certainly make us all want to do all that we can from now on in promoting the sale of candy."

#### **Six Points to Which a Production Manager Should Give Attention**

1. The educating of the sales department, and back of it the customer, to the cost of variety and of unstandardized product.

2. The standardizing of the manufacture of non-standardized product when it is necessary to accept orders for such material.

3. The penalizing of orders for special product both as to price quoted and to time of delivery, to allow for the extra cost of manufacture and time required for the most efficient operation of the plant.

4. The cataloging of live or quickly turned product only, that is, the omission of obsolete, little called for, and unnecessary items.

5. The standardizing of raw materials which is of benefit not only to the concern doing the standardizing, but also the industry supplying the raw material.

6. The simplifying of factory operations, that is, bringing the entire procedure under the production manager's control.—Factory.

#### **Production and Wages**

Production and Wages are inseparable, but—Production comes first.

There must be production before there can be any wages—

Because wages are paid out of production.

There must be enough production to earn the wages paid.

It is impossible to pay total wages in excess of total production.

If a business pays an individual worker wages in excess of his production, it is because fellow workers are making up his shortage in production.

Whenever one man's production is less than his wages, then some other man's wages is less than his production.

Under-production, instead of increasing wages, actually reduces the total wages paid.—American Educational Association.

# World Economic Situation for 1923

by Secretary of Commerce Herbert Hoover

**T**HE following summary of the world's economic situation and prospects is based upon the special investigation of the Department's representatives in each foreign country.

In the large view the world has made distinct economic progress during the past year and the conditions are very favorable to continued progress during 1923. There are in exception three or four states in Europe which give continued anxiety, but these exceptions should not obscure the profound forces of progress elsewhere over the whole world. In the main even in these areas of uncertainty the difficulties are to a large degree fiscal and political rather than commercial and industrial.

During the year the world generally has gained in social stability: Bolshevism has greatly diminished and even in Russia has been replaced by a mixture of socialism and individualism; at least active war has ceased for the first time since 1914; famine and distress have diminished to much less numbers this winter than at any time since the great war began; production has increased greatly during the past year; unemployment is less in world totals than at any time since the armistice; international commerce is increasing; the world is now pretty generally purchasing its commodities by the normal exchange of services and goods, a fact which in itself marks an enormous step in recovery from the strained movements of credit and gold which followed the war.

In our country unemployment has ceased to be a problem and we are indeed upon an economic level of comparatively great comfort in every direction except for the lag of recovery in some branches of agriculture. Even in this field there has been a distinct improvement in prices in the past twelve months and its troubles are mostly due to over production in some lines. Our manufacturing industries are engaged well up to the available labor; industrial production has enormously increased over last year; real wages and savings are at a high level. Our transportation and housing show great gains in construction, though we are yet behind in these equipments. Both our exports and our imports are again increasing after the great depression and are today far above pre-war levels.

Outside of Europe the whole world has shaken itself free from the great after-war slump. The economic wounds of Asia, Africa, Latin America, and Australia from the war were more the sympathetic reaction from slump in the combatant states than direct injury. Their production and commerce has recovered

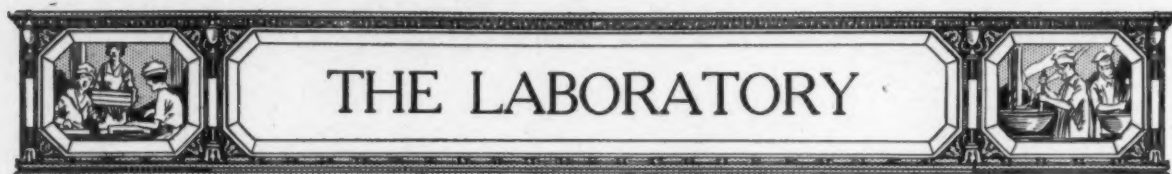
to levels above pre-war. The enforced isolation of many areas in Latin America and Asia during the war has strengthened their economic fibre by increased variety of production and has contributed vitally to their effective recovery.

In Europe, England together with the old neutral nations are making steady progress in production and diminishing unemployment. Their trade and commerce are improving; their governmental finances are growing stronger; their currencies that are not already on a gold basis are steadily approaching par; and their exchanges are more stable. The combatant states on the Continent are slower in recovery. Even these nations, including Russia, have shown progress all along the line in commercial, industrial, and agricultural fields although the harvests suffered in some spots. Some of these nations such as Italy, Belgium, The Baltic States, Poland, Czechoslovakia, and Hungary show increasing political and social stability and improvement in their Governmental finances. In Germany and some minor states in southeastern Europe Governmental finance and political difficulties threaten to overwhelm the commercial and industrial recuperation already made.

The continued maintenance of armies on a greater than pre-war basis in the old Allied states maintains political uncertainty, lowers productivity, and retards the balancing of budgets with consequent cessation of direct or indirect inflation. Disarmament and the constructive settlement of German reparations and the economic relations of states in southeastern Europe are the outstanding problems of Europe, and their adjustment to some degree will affect the progress of the rest of the world. The more general realization during the past year of the growing menace of these situations and the fundamentals that underlie their solution is in itself some step toward progress. Their solution would mark the end of the most acutely destructive forces in the economic life of the world which still survive the war.

Economic forecast can not amount to more than a review of tendencies and a hazard in the future. The odds are favorable for 1923; the world begins the year with greater economic strength than a year ago; production and trade are upon a larger and more substantial basis, with the single exception of the sore spot in Central Europe. The healing force of business and commerce has gained substantial ascendancy over destructive political and social forces. There is ample reason why there should be continued progress during the next twelve months.





# THE LABORATORY

## Dos and Dont's for Candy Superintendents

by Dr. A. P. Bryant

Consulting Chemist, National Confectioners' Association

**W**HEN the editor of the Candy Manufacturer asked the writer to prepare a short article on the above topic he at first demurred, but finally agreed to make the attempt, not from the standpoint of the man who has been through the active work in the candy factory, but rather from that of the chemist and works manager. If, therefore, some of the Dos and Don'ts should seem foreign to the actual surroundings remember, first, that perhaps they may find application in some instances, and second, that the editor is after all chiefly to blame. (It is a privilege to be blamed for Dr. Bryant's valuable contributions in this magazine—Editor).

I am reminded of an incident occurring many years ago when the writer had rather an exciting hour on the upper St. Lawrence River. A row boat was hired and the little family started out with never a cautionary do or don't from the boat owner, because he either supposed that we knew the river, or thought it an unnecessary waste of breath to explain that there was a very strong current with dangerous Rapids below. The result was that only by very severe effort was the boat kept out of the Rapids and perhaps disaster averted.

This brings us to the first kind of Dos and Don'ts which has to do with the education of the employee. Experience has shown that the average foreman does not usually take the necessary time to show the new man the ropes or to explain to him the why's and wherefore's and how to avoid troubles. Perhaps the foreman does not always understand these conditions himself, therefore

*Explain to your foremen and employees the reason for various manipulations. Don't expect them to give their best and most intelligent efforts if you have not given the reasons why.*

*For example, explain to him that the "grain" must be cooked entirely out of the sugar in the candy kettle because if it is not, the candy will grain too rapidly and be too coarse in texture.*

*Explain that the flavoring added to candy while too hot results in unnecessary losses due to the driving off of the volatile oils.*

*Explain that even the slightest traces of acid cause sticky candy because of the action on the sugar, producing invert sugar which in turn absorbs moisture and makes the candy sticky, and that too long a time in the candy kettle tends to produce similar results.*

*Explain that egg albumen will be cooked like the white of egg (which it is) and that gelatine solutions will be greatly weakened if the temperature reaches too high a degree and in this way their value greatly lessened or completely lost.*

*In fact, explain the workings of the department as minutely as possible and the outcome will be better controlled operations and better results in general.*

If there is any place in the world where it pays to live up to the old adage that Cleanliness is next to Godliness it is in the candy factory which leads us to another kind of Dos and Don'ts.

*Insist that all utensils be kept scrupulously clean. Don't furnish board and lodging for all the wandering micro-organisms that are looking for a suitable home. These organisms may not be harmful to health but they may be the source of an endless amount of candy troubles.*

*Keep the floors clean;—Don't allow candy and other materials to accumulate on the floor. One large establishment I visited recently has one floor cleaning period per year but that begins January 1st and ends December 31st and the floors are immaculate at all time.*

*Insist on personal cleanliness among employees. Don't expect clean candy made by unclean employees.*

Economy of production is one of the chief aims in any manufacturing establishment, but there may be a long distance between apparent and actual economy. The proverb reads "Take care of the pennies and the dollars will take care of themselves," but it costs 2 cents to save 1 the result is far from satisfactory:—Which brings us to another kind of Dos and Don'ts.



*Buy the best materials. Don't economize at the expense of quality.*

*Make eating quality as well as attractive appearance your aim. Don't think for a moment that all persons eat with their eyes.*

*Use discretion in the amount of coloring in candies. Don't try to make candy which beats in appearance the array of Solomon in all his glory.*

*Watch the vacuum pan. Don't trust the catch-all to take care of all the entrainment under all conditions; very serious loss may occur at this point*

*Water is a good thing and is cheap, but don't try and leave too much of it in your candy because this may result in deterioration and losses.*

*Encourage your foremen and employees to make suggestions, and don't laugh at these if they are sometimes absurd. If they are not practical explain why; if good say so. Praise is the greatest stimulant to increased effort.*

The problem of increasing quality, or yield, or of the production of Specialties of ready sale constantly confronts the factory superintendent and makes a word of caution desirable especially in these days when so many cure-alls, wonderful discoveries, and the like, are pushed under one's eyes almost daily.

*Don't try using everything that is suggested as a cure-all for every candy ill. In the first place cure may be worse than the disease and in the second place you may be running contrary to the Pure Food Laws. For instance, Bisulphite of Soda is frequently offered in a more or less camouflaged form as a candy conditioner or bleach, and yeast is sometimes added knowingly or unknowingly to produce soft cream centers; this latter is like trying to warm a powder mill with an open fire.*

*Try and find out something about new materials; first, by asking for information from the secretary of the National Confectioners' Association or reliable source elsewhere and second, by careful experimentation on your part. Don't take chances.*

And finally as regards the personal relation of the superintendent with his men.

*Be even tempered and considerate. Lemons and crabapples even if candied are not desired as a steady diet and men resent a sour disposition in those over them.*

*Don't ask the impossible but do insist on fairness and justice to all. Some drivers will get more work from their horses in one-half hour without the use of the whip than others in twice the time with free use of the whip. Some foremen will get more work performed by their men in one-half day without apparent effort than others in a full day.*

## Make Candy Your Valentine

By V. L. Price

Director of Publicity, National Confectioners' Association

WE are going to ask you to take a mental straw vote with us. Imagine if you had 10 youngsters, boys and girls before you and 10 grown-ups, men and women, and you presented to them for their consideration and choice on St. Valentine's Day some candy in one hand and a piece of printed paper or cardboard with some sentiment on it in the other hand and you were to ask which they would rather receive on Valentine's Day, candy or the printed card, we are sure there would be an overwhelming majority vote for the candy.

On Valentine's Day the envelopes deluge one's home and office; they are scattered from the chandelier to the waste basket. The wind and drafts find them delightful playthings which, of course, is no fault of the Valentine. We do not want to disparage the old institution of the Valentine, but taking a more modern view of this holiday we cannot help but feel that the average individual would rather receive one gift of candy than several dozen Valentines from the standpoint of pleasure received. We believe that the utility or desirability of candy for St. Valentine's Day, if properly advertised and suggested, is greater than the Valentine itself.

Believing this we have adopted as our slogan for this holiday the phrase "Make Candy Your Valentine" and the Publicity Department of the National Confectioners' Association is offering window posters symbolic of the St. Valentine spirit and sentiment containing the official slogan of the industry and the suggestive phrase "Make Candy Your Valentine." This attractive St. Valentine's window poster if displayed in your retailer's window the week of St. Valentine's Day will stimulate his candy business and be a good-will builder for you.

When this idea "Make Candy Your Valentine" is suggested to the average individual he will feel that candy will prove a more desirable present, and the average purchaser wants to give that which is most acceptable in the eyes of the recipient of the gift. This is a splendid opportunity of helping your retail distributors to get their share of the available business that is to be gotten on St. Valentine's Day, February 14th. It's there if retailers are organized to go after it and we are providing the means of going after it.

Orders for Easter trims should be made so you will have them for distribution to your jobbers and dealers in February. This trim is equally effective and will produce candy sales for you at Easter time. Let us all pull together in the big idea of making more holidays candy buying days. It can be done. Then we'll have more selling seasons and more business.

# Announcing—

An Extensive Series of Articles

## Candy Factory Management Methods

by Ralph G. Wells

Following his connection with the Employment Managers Association of Boston, Mr. Wells has been doing consulting and research work on Management Methods, Production Control and Industrial Relations

Mr. Wells' article on "Foremanship" (opposite page) in this issue is an index to the thorough and practical way this series will be treated.



For further side-lights of Mr. Wells experience and work see Editor's Note on opposite page.

Mr. Wells' series will include the following subjects:

1. Management Problems and Control Methods in the Candy Industry.
2. Manufacturing Standards, Production Programs, Co-ordinating Sales and Production.
3. Production Control, Schedules, Routing, Despatching.
4. Material Control, Purchasing, Stores Keeping, Care and Handling.
5. Plant Location, Layout, Arrangement, Machinery and Equipment, Power Problems.
6. Selecting the Best Methods, Job, Time and Motion Study.
7. Financial Problems, Budgets, Cost Control.
8. Waste Elimination, Maintaining Production Standards, Quality, Time and Cost.
9. The Management Organization, Departmental Functions, Co-operation and Co-ordination.
10. Labor Planning, Policies and Practices.
11. Labor Management, Relations with Employees, Maintaining an Effective Working Force.
12. Looking Ahead, Sales and Business Forecasts, Experimental and Research Work, The Annual Overhauling.

# I—Foremanship

The first article of an extensive series on Candy Factory Management Methods based on a special investigation of manufacturing problems in the candy industry.

**by Ralph G. Wells**

*Consulting Specialist, Factory Management Problems and Industrial Relations;  
Member Committee on Industrial and Commercial Planning, Boston Chamber of Commerce;  
Member of Faculty, Boston University—College of Business Administration.*

EDITOR'S NOTE: This article is a masterpiece on Foremanship Training and Management of the Working Force. May we have comments from superintendents on methods and organization plans in handling the work?

Mr. Wells was formerly Secretary, Employment Managers' Association of Boston, and is well known among the larger manufacturing confectioners of New England. This series of articles is based on a careful analysis and personal investigation of conditions and problems in the management of a candy factory and written exclusively for THE CANDY MANUFACTURER.—EDITOR.

**R**ECENT years have seen the development of a new kind of foremanship in the candy industry—a development in keeping with the transition from the one-man candy shop to the modern well-organized and equipped candy factory, where the output is made in accordance with definite production schedules. There is, of course, a wide variation in the duties of the candy foreman, from the smaller establishment where he must in the very nature of things perform a wide range of duties, to the man in the large plant where a staff of experts and a full complement of service departments make it possible for him to concentrate on the major problems of handling help, getting out production, maintaining quality and keeping down costs.

Competition among manufacturers today is such that each firm must put forth its best efforts to develop a supervisory organization strong enough to insure the maintenance of quality and the production of goods at a cost low enough to meet competitor's prices. Success depends largely on the selection, training, and development of capable men, well-grounded not only in technical knowledge but also in the principles underlying modern production and control methods. Exactness in formula and in mechanical methods requires an accurate, painstaking attention to details. Large scale production, in which costs are kept down and delivery schedules maintained, requires a high degree of executive ability. These in turn call for active, progressive men eager for new ideas but level-headed, who keep their feet on the ground all the time. No firm can afford to be handicapped by men who cannot measure up to the

requirements of the new order of things wherein methods "rule of thumb" are fast giving place to carefully studied manufacturing standards.

Many foremen today are at the head of productive units larger than the average candy factory of former years. More than that, the foreman is an integral part of an organization whose success depends on the proper functioning of his department. In many respects the 1923 candy plant is like the big twelve cylinder auto engine. Each department is a cylinder, while the foreman is the valve, the timer, and the spark plug. Everything runs smoothly and high speed can be attained so long as the departments synchronize harmoniously. If they do not, then the production schedule begins to slip and the output of the factory must suffer.

It is a pleasure to watch the work of the keen, earnest men who are in charge of the various rooms and departments of confectionery plants. More delightful still is the opportunity to meet them in spare moments and see how thoroughly they are studying their problems, planning for improvements and originating methods for surmounting difficulties. This privilege has been given to me. Below I set forth some observations and ideas picked up during my rounds of various plants.

In some plants departments were running so well that foremen hardly seemed necessary, giving strong evidence that a capable production executive was in charge. Work should be so well organized, employees so well trained, and methods so well in hand that the whole process seems to run along without effort. Such conditions do not exist in a department until the foreman has laid a sound foundation. Once established, they make a much stronger im-



pression than where the head of the room is so buried in detail that he never has time to organize his work.

Some have constant trouble with machines, equipment, and processes, while their workers are always slacking and making mistakes. These foremen never seem to rise above the tide of trouble and the faults that weigh them down and, of course, are fast passing out of the industry. Many, who are willing to learn modern methods, grasp new ideas, and profit by the experience of others, are being chosen in their stead.

In every plant visited, quality, quantity, and low cost were the ultimate goals. An interest in the methods used to obtain these results led to a somewhat careful study of the practices in vogue. In the course of this study, much material was collected, but space limitations make it desirable to present it in somewhat condensed form.

#### **Maintenance and Repair Department**

As indicated in the beginning of this article, an increasing number of plants are establishing special staff and service departments to handle for the entire plant certain duties formerly left to foremen. The establishment of such departments has numerous advantages, particularly from the standpoint of the department head. When properly organized they aid him in handling many problems, saving him much time and worry. Relieved of these details, he can devote more time and attention to the larger problems of his department.

Perhaps the best known example of the type mentioned above is the maintenance and repair department. In some plants the chief of this department has under him inspectors whose job it is to inspect and overhaul machines and working equipment at regular intervals, to see that they are in proper condition. Production men take the existence of a maintenance and repair department so much as a matter of course today that few realize that there are still a large number of big plants where the foreman has to make all of his own repairs unless serious enough to require mechanics from the outside. It is certainly a great relief to the foreman to have someone else make his repairs and handle his maintenance work for him. In the same way different departments are being installed to handle other routine details for the foreman, so that he can concentrate his attention on the more real problems of quality, time and cost.

#### **Employment Department**

Another good illustration is the employment department maintained by many well managed plants. Its function is to sort out and select from the many applicants such as are fitted for the company's requirements, and to send to each foreman those suited to his needs. Accordingly the foreman does not have to spend his time in interviewing every prospect that comes along or in hunting for workers to keep his

ranks full. Still, there are men who resent the employment department as an encroachment on their prerogatives. These, however, are few in number because the real production man is more interested in the success of his work than in maintaining his own dignity, pride and prestige. He appreciates the many good points of a well-organized employment department and its assistance in saving his time. He recognizes that it relieves him of troublesome details and keeps him supplied with workers of the right kind.

#### **Training New Help**

Coupled with the employment department has been the development of well-organized training methods in companies employing a sufficient number of workers to make this worth while. Much study has been given to the training of candy workers recently, especially girls who are to be employed in the dipping and packing departments. It has been found that competent, well-trained instructors, who can give their entire time and attention to breaking in new employees, can secure excellent results. Under such instructional methods the new employees are given a more thorough and accurate training than is possible if they are simply put into a room and allowed to pick up what they can from older employees working at the speed of skilled operatives. They do not acquire faulty practices and they reach the necessary standard of proficiency much more quickly. In a plant where the foreman does not have the assistance of employment and training departments, the selection and instruction of his help naturally constitutes one of his primary problems. There are, of course, many plants where the number of workers involved do not warrant the installation of separate departments for such work.

#### **Maintaining Quality**

Another staff department is the one responsible for the maintenance of quality. Its primary function is to establish by research and experiment definite quality standards both as to formulas and as to operating methods, for the guidance of the production department. Frequently there is a staff of inspectors specially trained to follow up working methods and to inspect the product as it passes from department to department, and to follow it into the shipping room. This method maintains uniform standards, and, through cooperation with the foreman, aids him in maintaining his quality. In other plants each foreman is given an assistant who is held responsible for the maintenance of quality. Each method has its advantages. Either serves, however, as a direct aid to the foreman.

#### **Production Control**

Perhaps the most notable innovation in recent years is the introduction of planning and production departments in the candy industry. Other lines of manufacturing have developed production control methods to a higher degree, yet it is only a question of time until competi-



tion will force practically every large candy plant to organize its production control methods along modern lines. In those establishments where such departments exist, nothing has proved more helpful to the foreman. A well-organized planning department, which develops for each period a well-balanced production schedule, enables each foreman to know just what is expected of his room each week. He knows "where he is at" and has a solid basis on which to plan his work. Such schedules and such plans, worked out in cooperation with the forecast of the sales department, cut down the number of rush orders. The existence of a well-planned schedule starts the initial operations in the coating and center departments in sufficient time to reach the dipping and packing departments soon enough to take care of orders and to meet the seasonal demands of the trade. The existence of such a schedule also makes it easier for the department concerned to fill emergency orders when required.

While the foregoing discussion of departmental organization may seem to apply only to the larger plants, experience is nevertheless demonstrating the fact that even the smaller factories may organize their work along such lines that it is possible to have a staff executive who handles many of these details, leaving the foreman free to devote the major part of his time and attention to getting out work and handling help.

But regardless of the size of the plant or the development of staff and service departments, there are a number of duties common to practically all department heads.

#### **Duties of Foreman**

1. Each foreman must understand thoroughly just what work is to be done in his department; the formulas and processes to be used; the standards of quality and quantity to be maintained. He should have at his fingers' ends information regarding materials to be used, temperatures, working methods, and similar data essential to the success of each operation. The enterprising foreman no longer tolerates chance methods in his manufacturing processes. He appreciates that the requirements of a highly competitive market insist upon uniformity and continued maintenance of quality standards.

#### **Facilities Required**

2. As soon as the foreman receives the production order he must know immediately just what help will be required to handle it, and especially whether he has a sufficient number of people in his department to get out the work. He must also know what equipment and containers will be needed and check up the material that is supplied him or else order it from the store-room in time to begin the work on schedule.

#### **Condition of Equipment**

3. The experienced man knows, therefore, that he can save much time and make his own work easier if he keeps his room and manufacturing equipment in such condition that he can handle on short notice any work that normally falls to the lot of his division. This demands constant supervision of the work-room in order to maintain the best conditions of cleanliness, equipment, light, temperature, ventilation, and the like. He insists on orderliness, providing necessary racks and other facilities where material can be kept out of the way, so as not to interfere with the even flow of the work. He carefully watches his movable equipment and sees that it is sent back to him regularly.

During slack periods and at odd moments he and his assistants make a careful study of the layout of the room, the position of tables, benches, and other equipment to discover more convenient arrangements which will facilitate the handling of work and moving of material. All working equipment should be gone over frequently to detect loose parts, splinters, nails, or anything else that may drop out and get into the finished product.

Another point is so well-known that it may seem unnecessary to mention, and yet were it not mentioned every experienced candymaker would notice its absence. Every candy man upon receiving an order thinks first of his containers, his molds, and other equipment used either in cooking, working or cooling. Once a batch is started there is little time for collecting and preparing utensils.

#### **Material**

4. Material is, of course, the primary factor of all manufacturing processes, and while in some plants — where production control has been developed to a high degree — material is supplied to the foreman more or less automatically, nevertheless, in many plants he is still charged with the responsibility of procuring at the right time the necessary quantities of the right material. Even if there is some provision for seeing that he has the right quality and quantity, yet every man should check these before starting work. No one is justified in putting through any material not up to the standards of quality without at least notifying the factory superintendent. The only exception to this rule might be in the case of the packing or dipping departments where the material is fed into their room automatically, and this only when it is well understood that adequate inspection has been made in previous departments.

The condition of material is another important consideration. This relates not only to cleanliness, but to consistencies and similar factors varying, of course, with each process and kind of material.

Position of material is yet another factor. Provision should be made for the material to pass from one process to another in the most

advantageous position, so that it can be handled by the next worker with the least chance for waste or confusion. A discussion of this point necessarily refers again to the question of containers and equipment. Hence the advantage of a careful study of the routing and handling of material. Great stress is placed on the importance of labor-saving facilities for the moving of material. There is unanimous agreement that adequate provision must be made for the handling of all material and the work in process promptly, with despatch, without confusion, with the minimum expenditure of time, energy, and mental effort in such a way as to ensure continuous flow from process to process and from department to department.

Of equal importance is the necessity of preventing workrooms or work benches from becoming cluttered up with material and finished work. Definite provision should be made for moving along worked material and finished candy at frequent intervals and passing it on immediately to the next room or placing it in the proper storage or rest places either for ripening or until it can be put through the next process.

#### **Labor**

5. Without question the most important factor in the life of every foreman is the effectiveness of his force of workers. He must know exactly the best kind and type of help for each particular job, the number that he requires under varying conditions, the minimum force with which he can operate his room, and the maximum number that can be worked efficiently during rush periods. He must be able to select or advise the employment department just how to choose the worker needed for his department. On his shoulders rests the primary responsibility for the introduction, training, breaking in and instruction of each worker. He is saved time and anxiety if someone else is responsible for the training of his workers.

In many plants each foreman, as has been said, is given an assistant whose task it is to instruct beginners and watch over them until they are able to turn out their full quota. Furthermore, a worker must not only be properly trained but provision must be made to keep him up to the standard of proficiency. When once a new employee is properly trained and given a regular place in the working organization, there remains the problem of his assimilation into the working organization.

#### **The Foreman's Duties in Detail**

The problem of managing the working force is of such importance that it must be deferred for a subsequent article. Adequate discussion of all the phases of the labor problem would be impossible in the space available this month. For the purpose of this issue it will be sufficient to enumerate the principal duties of a foreman in handling his workers and directing their efforts.

1. *Tell the workers what to do (job instructions).*
2. *See that they do it (supervision).*
3. *Keep them up to performance, standards of quality, time, and methods (control).*
4. *Check the job to see if it is properly done (inspection).*
5. *Keep up morale, interest, enthusiasm (stimulus).*
6. *Keep them in good humor, avoid friction, forestall trouble with other employees (tact).*
7. *See that they improve and become fitted for better work (development).*
8. *Explain mistakes, criticize errors, and show how to outgrow faults (correction).*
9. *Express appreciation of interest, efforts, and work well done (encouragement).*
10. *See that company rules and regulations are lived up to (discipline).*
11. *Discontinue service as employees (termination).*
  - (a) *If voluntary (quit)*
  - (b) *If involuntary (discharge)*
  - (c) *If temporary (lay off)*
12. *Avoid accidents, maintain health, keep workers in good physical condition (safety, sanitation, health service).*
13. *Prevent unnecessary fatigue, nervous strain, or mental stress (fatigue elimination).*
14. *Give assistance and advice in case of personal difficulties (personal aid).*
15. *Promote general welfare, thrift, and improvement in personal affairs (social service).*
16. *Encourage right attitude toward other individuals, society, the public and the State (citizenship).*
17. *Explain the company's policies, see that they understand the company's attitude toward them, toward customers, and the public at large (interpretation).*
18. *Instill the idea of wanting to do a good job for the sake of the job itself (workmanship).*
19. *Instill the idea of responsibility, courtesy, and assistance to customers (service).*
20. *Keep track of work done, time spent, earnings, efficiency, service record, etc. (Time-keeping, reports, records).*
21. *Lay out work to be done, determine the order in which it is to be done, where it is to be done, and the time in which it is to be done (planning, routing, scheduling).*
22. *See that they start work as planned on time and maintain schedule (despatching or direction).*

(Continued on page 68)

# The Superintendents' Round-Table

*It has been nearly a year since this department appeared in THE CANDY MANUFACTURER; therefore, we would like to state again that the purpose of The Superintendent's Round-table is to provide an opportunity for a free and open discussion, through the medium of this magazine, on any phase of the subject of Production, by candy factory managers, superintendents, foremen or anyone interested directly in the manufacturing problems of our industry. That means any time in any issue; every issue is a superintendents' number, although we stress the subject of Production more in our issues of January of each year.*

*We all realize it represents a real sacrifice for any candy superintendent to prepare an article in the midst of the congestion and pressure of work just before the Christmas holidays, and it cannot be expected that this department in the January issue be representative of the interest and responsiveness of the practical men of this industry. Therefore this round-table will be continued.*

*There are a number of articles scheduled for this issue that have not yet arrived for the above reason, but they will appear in an early issue. For instance, our readers may expect a little later to hear from Mr. Cole of The Cracker Jack Co., Mr. Chas. W. Ray of Hoeffler's Centennial Chocolates, Inc., Gordon Stewart of Park and Tilford, M. F. Colebrook of Rochester Candy Works, J. M. Long of Oswego Candy Works, and many others. In the meantime let us have your informal, impromptu comments on the subject matter presented in this issue which will contribute to the practical value and application of these round-table discussions for our mutual good.—EDITOR.*

## Quality Not Incompatible With Quantity Production

*by Dale G. Steely*

*General Superintendent, W. F. Schrafft and Sons Corporation*

A very interesting and logical discussion on this point of how quality and quantity production just naturally work hand in hand. Mr. Steely is one of the pioneer candy men. He has been instrumental in perfecting one of the most efficient factories in our industry, a factory where the organization spirit is just about ideal and where quality fairly radiates from everything and everybody associated with Schrafft's.—EDITOR.

**R**EGULAR Round Table discussions of subjects of common interest to the participants can be, and probably generally are, of benefit to all of them. Sometimes the informal ones are most fruitful.

A number of years ago I was fortunate to be a member of the so called Labor Problems Committee of the New England Manufacturing Confectioners' Association and as labor enters into every ramification of industry, almost every phase of the business was freely and openly discussed at our weekly meetings. The problems that were uppermost at the time were taken up and thrashed threadbare. Various members of the Association came to us for help—whether we helped them or whether the As-

sociation profited from our reports or not are questions—but the members of the Committee got a great deal of good out of the discussions, more even perhaps than was realized at the time.

Once a subject is presented almost everyone of experience has something of value to contribute, at least to a few, if not to all concerned. But, for one who has always had plenty of troubles of his own to solve to sit down in cold blood, choose a subject and make it interesting, that's another thing entirely. So if I seem presumptuous or fail to interest, charge it up to Mr. Allured. When he asked me to join the discussion I did not promise anything, except to do the best I could. In fulfilling my promise I hope to touch upon a few high spots that have



seemed to me to be mistakes, quite common in candy factories.

#### Quality and Quantity Production Have Much in Common

The question of quality and quantity production is with us from first to last and can be viewed from many angles. There are at least two degrees of quality—the best that can be produced, and the best that can be produced for the price. The only difference being in the grade of materials used. For present purposes we will consider quality production, as getting the nearest that is humanly possible to 100% on specifications.

It would seem that, to many, quality is incompatible with quantity production. Is this view not a mistake? *Is quality not at its best when production flows with a brisk and steady movement.* And, at its worst when it drags and halts and fails to connect? Is not quality frequently sacrificed to expediency, in making up time lost by bad planning and in lagging processes, hurried through somehow to meet connections in order to save the day?

Quality is the reward of thought, preparation, earnest care, and the whole hearted interest of every one engaged in the work. How can interest be awakened and kept alive, when things just wobble and falter along? The best formulae and the finest materials are of little avail where there is lack of interest in the work.

Quantity production should and can be made up from about the same ingredients as quality production. The proportions vary and there is probably the addition of enthusiasm and "pep." Also, there must be a portion of self-restraint thrown in, lest the batch be rushed through and spoiled.

The quality man is often called a crank, he is fussy about what others call "little things," though he is sometimes not a good planner.

The quantity production man however is a good planner, he knows how to work and how to teach others to work and he does it. There are many ways of doing most things, but usually there is one best way, and the quantity man does not rest till he finds that way.

Under stress of competition some men think first of cutting wages, or reduce quality, or perhaps do both of these things. A real production man finds a way to cut costs through finding better methods. Under the quantity production man there is cooperation and co-ordination—in other words, System. Can quality come from other sources?

#### A Study in Contrasts

An inspection of a candy factory a short time ago was a lesson in how not to do things. Two examples will show how the whole factory was run. Of a number of Enrobers, three were running; starch trays with centers piled too

centers at each of the feed belts. In the packing room six girls were lolling over the strenuous task of packing, two at each of the three high in each tray, were stacked behind each machine. Two girls were languidly placing machines, actually less than should have been done on one. Of course the quality was poor.

In another department some girls were grouped around printed starch trays, piled on two empty barrels, dropping walnuts. The supply of nuts was in a case on a table a few feet away. Each girl stepped over to the case, now and then, to get a handful of nuts. The nails from two sides and one end of the cover had been removed and the cover pried up from one end was standing upright at the other. There was plenty of evidence that the nuts had not been picked over. Everybody looked disgusted and was waiting for five o'clock. The best help obtainable would be demoralized in such a place in no time. This case is not cited as being typical, either here or elsewhere. Nevertheless, the factory occupies a building with many modern improvements and bids for the finest package trade.

Another case is of a man who complained that he could not hold his chocolate dippers. He said that if he paid the wages that certain of his competitors paid he would lose money. An investigation revealed that he was actually paying higher rates, though his girls were earning less. He was given information showing the average number of pounds dipped per hour per person in the factories of two of his competitors.

Sometime later he thought there must be a mistake in the figures given him, as his dippers could not even approximate the average in the other two factories. Further investigation showed five contributing causes of his troubles: namely,

- (1) chocolate too hot.
- (2) waiting for chocolate.
- (3) waiting for centers.
- (4) warm centers.
- (5) imperfect centers—such as soft creams, caramels sticking together, starchy nougatines, cripples, etc. There was probably a sixth cause in the presence of old "General Discontent."

On the other hand a man who has made a careful study of industrial methods in all sorts of businesses was telling of a factory he had visited. "Why," he said, "the foremen and forewomen do not seem to have anything to do—things just seem to flow naturally through from top to bottom without effort on the part of anyone." Then he explained that the routing of materials was well planned, the foremen and forewomen were all well trained, that they and their subordinates knew their jobs and were attending to them. The two bad cases cited, while extreme, and the latter one help to illus-



trate the point that quantity production serves quality production. The following further illustrates it.

A superintendent was called to the office of the "Big Boss" and informed that the margin of profit on a certain piece was too great. It was a new complaint, but the superintendent survived the shock and waited for instructions. "See how much this piece can be improved," he was told. All of the improvement that could be devised still left more profit than was deemed fair or good business. Accordingly, the price was lowered. The sales increased greatly, yielding a larger aggregate profit than would have been possible at the former price, and at the same time consumers and dealers both were benefited.

The gist of what I am trying to point out, to anyone looking for help, is: Get the horse before the cart. Don't handle a thing twice if the desired result can be accomplished by handling it once.

Give workers room enough to work in. Three girls, with room enough, will—speaking off-hand—do more work than five who are so crowded they don't have elbow room and are stepping on each others toes.

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Keep workers supplied with necessary materials and see that the finished work is taken away promptly. Don't expect a full day's work, unless you supply all the means. In short, study your work constantly, be your own efficiency man. There is no magic in getting efficiency. In a nut shell, it's doing things in the most direct and simple way.

One more thing. Good workers like to work in a well managed, orderly place. Only the slackers will remain in the factory that runs on the hit and miss plan. Without regular attendance at work you cannot have a good organization, and only in a good organization is either quality or quantity produced.

## Cleanliness and Its Relation to Labor Turnover

by Frank M. Christ

*Formerly General Superintendent, E. J. Brach and Sons*

**I**N no industry with which the writer is familiar is the issue of cleanliness of such paramount importance as in the manufacture of Candy. Those of us who have been affiliated with this and allied industries have seen the many changes that have taken place in the past few years and have watched the little, slovenly kitchens of a decade or so ago disappear and be replaced by modern, clean, light and sanitary factories, equipped with every known device and means for maintaining a degree of wholesomeness that is in common with other food industries.

The subject of cleanliness as applied to the manufacture of candy in a large way, embodies so many intricate details, that it is difficult to cover the subject in a short article. However, it begins, of course with Plant sanitation. The familiar housewife's boast that one could eat off her kitchen floor, is a standard that must be maintained in a modern candy factory.

Spotless cleanliness throughout the plant obviously costs real money for its maintenance, thousands of dollars annually, as it necessitates the installation of suitable flooring to permit of being scrubbed with soap and water daily or many times daily, as conditions may require, also some suitable means for flushing or rinsing the floor. This is one item alone. The machinery must be given the same careful attention, being thoroughly cleansed after each

operation, in order that the same atmosphere of cleanliness—shall be maintained.

Then, the item of labor must be considered. Employees should be so garbed as to permit of their greatest efficiency and at the same time maintain the standards of cleanliness as heretofore set down. This means the installation of costly bath and wash room equipment and the careful supervision of these details for fear that some of them might be slighted. It also, requires the installation and operation of a modern laundry in order that employees uniforms may be maintained in spotless condition. This, however, covers only the superficial or visible evidence of cleanliness.

In a modern plant many additional steps must be taken. For instance, every factory should be organized with medical service and inspection and careful attention given to personal welfare of the workers. Each and every employee, even including office help should be required to call for examination at stated intervals. These departments should be maintained within the factory walls, primarily as a matter of convenience, but also as a means of enforcing, if the desire on the part of the individual is lacking, the maintenance of a very high standard of personal cleanliness.

Now consider the effect of such a policy on the individual. Can you conceive of any better way of welding employer to employee than a

real and visible interest that has nothing to do with the time clock, but that means a better, a more efficient employee, kept efficient and healthy and incidentally happy.

One of the great items of factory operation cost is that of labor turnover. Millions of dollars are lost annually on this basis alone. A trained employee, familiar with our factory routine, familiar with our product and our methods, represents just so many dollars that have gone into his training. Now if this employee is to become dissatisfied, the cost of his training is a total loss, and must be gone through with again for his successor. Can you not see, therefore, how labor turnover is such an item of expense. Plant cleanliness and careful supervision over the welfare of the employee has every tendency to reduce the labor turnover to an absolute minimum, the writer personally knowing of large institutions operating with a labor turnover of less than four per cent annually.

The subject, as briefly covered above, is entirely too broad and far reaching to be feasible for the small candy manufacturer, but every year sees the gradual weeding out of the inefficient small manufacturer, either through his growth or from other economic conditions, and sees the replacement of his small plant by modern—daylight—structures, employing regular sanitary engineers, whose entire duties consist of maintaining the standards of cleanliness as laid down by the management.

Very little publicity has been given to the subject of cleanliness by the manufacturer of candy, probably for the reason that a large proportion of the confections marketed today are sold in bulk, where the ultimate consumer knows neither the brands or the packages, and judges entirely by the tastiness or goodness of the candy. The writer calls to mind, however, one manufacturer of condiments whose entire success—and it is a success worth mentioning—has been founded on “getting over” to the consumer the degree of sanitation and cleanliness maintained in his plant.

The Candy Industry, ranking, I believe either sixth or seventh in all the manufacturing industries of America, owes to the public a little more of the inside information that has heretofore been kept possibly as trade secrets, and I can think of no better way to improve conditions in this line than for each manufacturer, in his own way, to take into his confidence his buying public—tell them what he has to offer—and—of far more importance—how this product has been produced, also what steps it has been necessary to use for the conversion of the raw material into the finished candy, and above all how carefully this manufacture has been supervised and kept from Nature's basic product to you, and me and everyone, clean, *clean*, CLEAN.

There is a trite old saying that “Cleanliness is next to Godliness”—and in our industry it is not only an essential but it is a duty to all mankind.

## Let's Know Our Costs

by H. J. Stoltz

Superintendent, Sioux Candy Co.

### The Successful Man Doesn't Meet Circumstances— He Makes Them

THE above title appeared on the November calendar of the Sethness Company, and I do not believe one could pick a better topic to comment on than this particular one, for I believe it applies to all of us in the candy manufacturing game.

What does it mean? It means that we are all too ready to copy something that the other fellow puts over, and once we all begin to get down and saw wood and figure out our own ideas, the sooner we will all be more successful. I will not talk at length on this, but will touch briefly a more important and vital problem of the business of today—costs.

#### How Is Your Cost System?

Every receiver in bankruptcy can tell you stories about facts discovered in business autopsies, which were responsible for failures and which could have been discovered before it was too late through the aid of good cost

systems. The average receivership, in other words, is evidence that the business could easily have been saved by accurate cost accounting.

A cost system is the most valuable bit of insurance a concern can have, for it is an insurance against expensive mistakes, and when properly designed and operated, the expense of this insurance is less in proportion to its benefits than that of any other kind.

In these days of close margins and keen competition, you cannot afford to be ignorant of facts as vital as those concerning your costs of doing business. Some one or more of your competitors—a beginner with a smaller business perhaps—is sure to know his costs; and once he pits this knowledge against your guesses he is certain to win in the long run. Knowledge is power. The beginning of managerial wisdom is a knowledge of costs.

The most evident reason for an accurate cost system is the necessity of covering more than the cost of the product in the selling price. To be sure, one may wait until the end of the year,

and after taking into account the inventories at the beginning and end of that period, and the entire income and the expenditure, arrive at a conclusion as to whether or not a profit has been made. In the absence of a cost system, however, such a conclusion relates only to the business as a whole, and does not enable one to know whether any particular line of the product has been sold above or below cost.

One of the first facts that a cost system usually shows the management, is the fact that if several lines are being manufactured, certain of them are profitable and others less so, while some are being sold at cost and some at actual losses. The value of such knowledge as a guide to the development or suppression of each line is apparent.

In order to estimate on new work, it is necessary to know the cost of each element that goes into it. That this knowledge is not general is evident from the very widely divergent estimates made on the same thing by different companies.

One of the most important uses of a good cost system is the information it gives regarding the extent to which the resources of the producing end of the business are utilized by the sales department. That is, the proportion of time the equipment and buildings are idle is an accurate index of the degree in which the manufacturing organization is fitted to market conditions. When business is dull, direct labor can be laid off and supplies of raw material may be reduced; but it is difficult and inconvenient to alter buildings and equipment to fit these fluctuations. When the cost accounting system is such as to show the cost of idle equipment and plant, it may be a most effective spur to the sales organization to increase sales or the management to dispose of its surplus equipment and plant if possible.

The fact that cost accounting includes some of the elements of financial accounting makes possible the interlocking of cost with financial accounts. This is indispensable for checking purposes, and without it a system of cost accounts may easily, and often does, go completely astray.

The object of cost accounting is to charge each element or unit of product with its share of all the expense to which the business has been subject, inasmuch as there is no certainty of making a profit on the sale of the product unless all this expense is absorbed in it and covered by the selling price.

The kinds of costs that a manager wants to get vary not only with the type of industry, but within each industry itself, according to the purpose for which they are wanted.

In a continuous or tonnage type of industry the aim usually is to ascertain the cost per unit

of weight or length for each of the comparatively limited number of products. This result is attained by getting departmental costs on the product as it makes its way through each department, totaling these and adding to them the general administrative expense to secure the entire factory cost. These costs are specific in so far as they relate to individual lines of product.

It must be clearly recognized from the start that any cost system involves a considerable element of judgment and can not therefore be as accurate as are engineering specifications which are based upon natural laws. There is bound to be an uncertain percentage of error in every cost estimate no matter how much care is taken to make it accurate. This being the case, it is a waste of valuable time and energy to attempt to make each detail of the estimate absolutely correct. The fact is that no amount of effort is going to eliminate inaccuracy from all the details, and unless all the inaccuracies are on the same side — plus or minus — they are pretty apt to offset each other, so that the net result will not be far from the truth.

This principle is laid down, not as an excuse for the rough approximations that sometimes go by the name of "cost accounts," but as a warning against over-refinement.

Just a word as to the use of the term "non-productive." Any expenditure for labor or material is either necessary for the efficient management of the plant and the making of the product, or it is entirely superfluous and should be eliminated. If the expenditure is necessary it must be in some sense productive.

This is fairly obvious even to those who insist on using the terms "non-productive" and "non-producer." Nevertheless those terms seem to carry some kind of stigma, involved in the suggestion that there is necessarily something wasteful about "non-productive" expenditures. There follows a tendency to reduce "non-productive" expense to a minimum which is really inconsistent with the proper management of a plant.

A favorite method of doing this is to have most of the alleged "non-productive" work performed by so-called "productive" labor, as when an operator is required to do his own planning, get his own materials, and the like, thus charging this work to "productive" accounts and incidentally losing all possibility of controlling it. When this type of necessary activity is called "indirect" rather than "non-productive," there is not the same implication of wasteful and unnecessary expenditure. There is no longer the same objection to bringing it out into the open, charging it properly, and organizing it for the most effective control.

Direct costs are chargeable easily and im-



mediately to the product, while indirect costs, which must be included in one way or another, have to be added by some method of distribution. It is perfectly evident what materials and what labor go directly into the product. Hence the securing of direct costs is easy and common.

Most of the simple cost systems, one-form

systems and one-man systems, so dear to popular business literature, deal exclusively with this necessary but obvious detail. In view of the fact, however, that indirect costs may amount in some instances to as much as two or three hundred per cent of direct costs, failure to take them into consideration may lead speedily into bankruptcy.

## Used Machinery

*A chapter from the experience of a candy superintendent who speaks with a frankness which prevents our mention of the identity of his present connection. If the shoe fits, put it on.—EDITOR.*

**W**HY is it that manufacturers will purchase brand new automobiles for their personal uses and comforts and for their factories will pick up so-called used machines?

The line of reasoning used in instances such as the above described is rather hard to follow. That it is being done every day is well known.

That the eventual cost in most cases of this nature will exceed the installation of a new machine has been proven in the writer's experience time and again. It is not, however, of the visible or apparent cost that this article treats but of that invisible or hidden cost sure to result if the machine happens to turn out as most of them do.

The invisible cost generally shows first through the production records and the first reaction therefore hits the production man. The question next in order generally being, "Now that we have added another so and so machine to our equipment, why are we not doubling our output?"

In most instances the real answer to this question is evaded and the belief expressed that we will soon reach the point of production desired; the machine hasn't been running just as it should and as soon as the mechanics get it in shape, etc., all will be well. Sometimes this does happen and the machine will work as good as a new one, but in the main they do not. More or less attention being required from the mechanical department in order to keep it going, and all this time the invisible cost is mounting higher.

### The Invisible Cost

The invisible cost of worn out machinery is the spirit created by the continual breaking down and the constant attention required by the employee whose duty it is to run the same.

As a rule it starts by a decrease in the production due, as before stated, to the machine. After a certain period it is due to the broken spirit in the operator who regards it now as a piece of junk that won't run and probably

the machine, through being practically rebuilt, is in far better condition than when he first started to use it. But he knows he is working against odds—that he is licked before he starts and that would kill the initiative and enthusiasm of any ambitious workman.

Then this spirit reacts on the quality of the goods; they are a little different now than before, no longer uniform, and finally, no longer sold. Because of what?

To cite a concrete case that bears out the above, the writer was in charge of a large factory that had a fairly good equipment throughout with the exception of an old wooden Mogul which was absolutely worn out. The management insisted that this be put into use and the hand printer and depositor which were being used at the time discontinued. On the face of it and from a production standpoint, the change was warranted if the machine would run at all.

After talking with the operator and getting his version of what was wrong with the machine, the mechanical department was ordered to fix this machine so it would work and to stay with it. When it was finally decided that it was O. K. the same crew used on the other side were put to running it, and before the end of an hour at least fifty boards had been piled up in it and an operator and a machinist kept constantly on the job trying to keep it running. The age of this machine was found to be about twelve years, was purchased second hand and what was sure to happen, another manufacturer purchased it after we found it useless.

Imagine if you can the spirit to work and turn out a large production on the part of the next operators of this machine.

In these days when the labor question is as serious as it is, managers should realize the importance of smooth running equipment and the part it plays not alone in production but in morale.

The invisible or rather overlooked cost is reflected in the spirit of the employee and is just as surely a part of the cost of production as the materials entering into the formula itself.



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## With the Manufacturers of Machinery and Factory Equipment

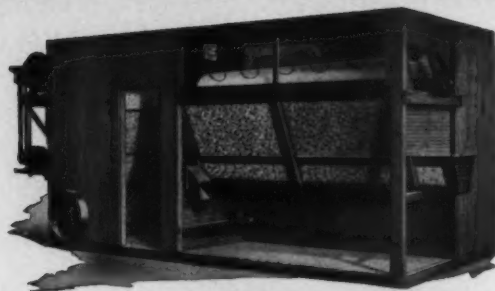
The following manufacturers of candy and chocolate machinery and factory equipment invite the special attention and consideration of candy factory superintendents to their respective sales messages presented in the advertising pages of this issue:

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Baker Ice Machine Company .....	88
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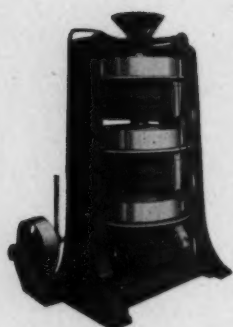
To the best of our knowledge the products advertised in THE CANDY MANUFACTURER have sufficient merit to warrant the serious consideration of our readers; we will appreciate any information to the contrary. We stand willing and ready to assist our subscribers in any possible and reasonable way in connecting with reliable sources of supply or in obtaining redress in any unfair or unsatisfactory transaction with our advertisers, though we assume no obligation in accepting the advertising.

Therefore, when all other things are equal, give preference to the advertisers in THE CANDY MANUFACTURER. If you do not find just the item of equipment or supplies you are looking for, remember you have free access to our Buyers' Directory files.

**THE CANDY MANUFACTURER PUB. CO.**  
30 North La Salle Street, Chicago



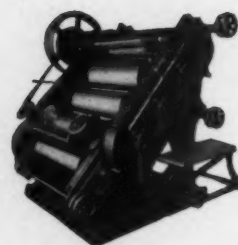
**COCOA COOLER  
AND BOLTER**



**TRIPLE  
MILL**

**T**HE Chocolate manufacturer who contemplates installing new equipment cannot afford to be without complete knowledge of these advanced Racine Machines.

They reflect the skill and experience of a chocolate machinery engineer of national reputation together with our well-known ability for manufacturing equipment of the very highest quality and efficiency.

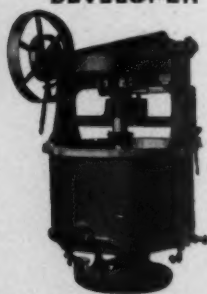


**FIVE ROLL  
REFINER**

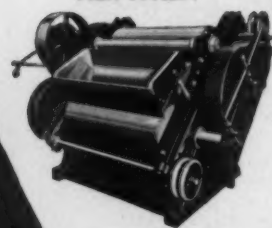


**ENDLESS CONVEYOR  
ATTACHED TO CHOCOLATE DEPOSITOR**

**CHOCOLATE  
DEVELOPER**



**THREE ROLL  
REFINER**



**RACINE**  
CONFECTIONERS' MACHINERY

For Particulars Write To:

**RACINE CONFECTIONERS' MACHINERY CO. Racine, Wis. U.S.A**

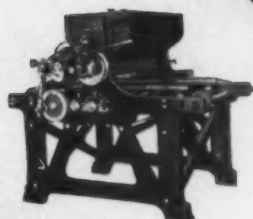




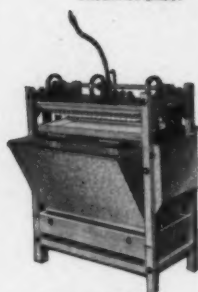
Caramel Sizer



Starch Buck

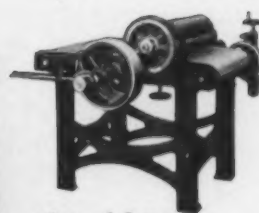


Depositor

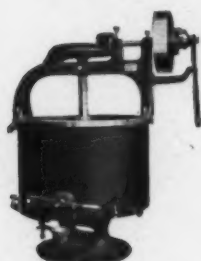


Starch Printer

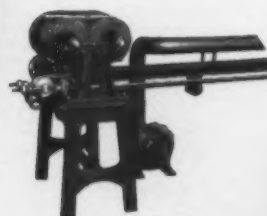
THE development of exclusive designs in improved machinery has made Racine Equipment the *Standard of the Trade*. We have succeeded in perfecting a Racine Machine for almost every need that adds something to the quality and swiftness of manufacture so necessary for the conduct of a profitable confectionery business.



Caramel Cutter



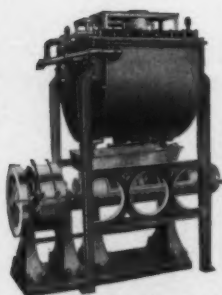
Chocolate Mixer



Continuous Cutter



Automatic Sucker Machine



Syrup Cooler and Cream Boater



Double Action Chocolate Mixer

**RACINE CONFECTIONERS' MACHINERY CO. Racine, Wis. U.S.A**

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# Thomas Mills & Bro., Inc.

1301 to 1315 North Eighth St.

Philadelphia, Pa.

## AUTOMATIC SEAMLESS HARD CANDY MACHINE

Send for pamphlet on this machine.

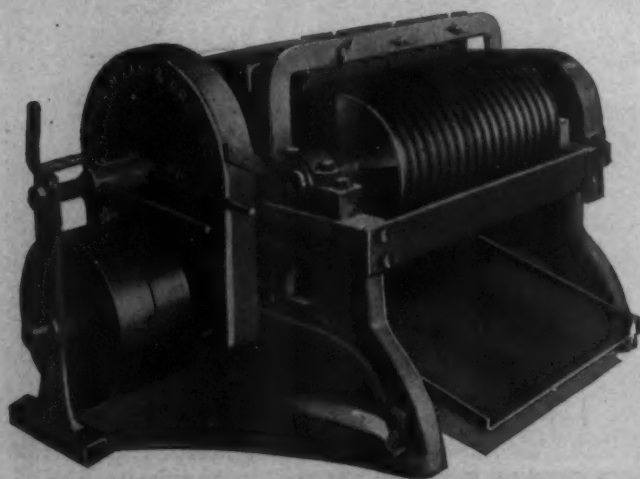


**Have You Our Latest Catalogue on Entire Line of Candy Factory Equipment?**

*If not, use coupon on opposite page and let us quote you on the kind of equipment you are especially interested in.*

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## No. 10 BALL MACHINE for COCOANUT, CREAM and CHICLE



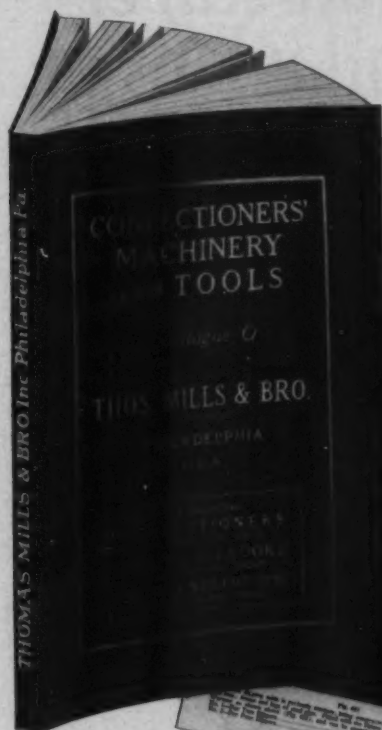
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**HEADQUARTERS  
FOR CANDY  
MACHINERY,  
TOOLS AND  
EQUIPMENT  
SINCE 1864**

---

*"If it's listed with Mills it's a success"*

# If it is listed in Mills' catalogue— It's a Success



**BEFORE** a machine or any item of confectioners' equipment is listed in our catalogue it must first have "won its spurs"—proved its merits in actual operation in a candy factory under average manufacturing conditions.

This has been our policy through 56 years of manufacturing candy machinery and utensils. It is your guarantee of satisfaction and service and saving of costly experimenting.

**Let Mills equip your factory.**

About 3000 items of confectioners' machinery and utensils in this catalogue.

This catalogue includes also some equipment of other manufacture which we know to be reliable, making a complete line of factory equipment for the manufacture of all kinds of confectionery.

May we have the privilege of submitting suggestions and estimate on the machinery and equipment necessary for the manufacture of the particular piece or line of candy in which you are most interested? No obligation of course. Be sure you have our catalogue on file. Attach the coupon to your letterhead, please.



**THOS. MILLS & BRO., Philadelphia, U. S. A.**

You may send a copy of your Catalogue of Confectioners' Machinery and Tools—gratis.

I am interested especially in \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

Sew it in The Candy Manufacturer





# How the Candy Manufacturer turned a Million Dollar Loss into a Million Dollar Profit

*By reproducing the Ideal Day 365 days in the year*



**O**UR ENGINEERS were called into consultation with one of the largest manufacturers of hard candies in this country. He had orders that had to be delivered and the hot, sultry summer weather made it impossible for him to operate.

It cost him just \$15,000 for every day his plants were shut down, and he wanted to turn that loss into a profit. He wanted to operate his plant 365 days in the year.

Our engineers went over his New York plant. They recommended the proper equipment, and they **GUARANTEED** the results.

Were the results satisfactory?

The answer is found in the fact that he had us equip his western plant a few months later.

What we have done for this candy manufacturer, we have done for many others, and we can do the same for you.

Pick out the ideal day for operating your factory and we will **GUARANTEE** to reproduce it 365 days in the year.

It will pay to investigate.

**B. F. STURTEVANT CO.**

Hyde Park, - - - - Boston

NOTE—The photo shown here is the Air Conditioned Packing Room of his western factory.



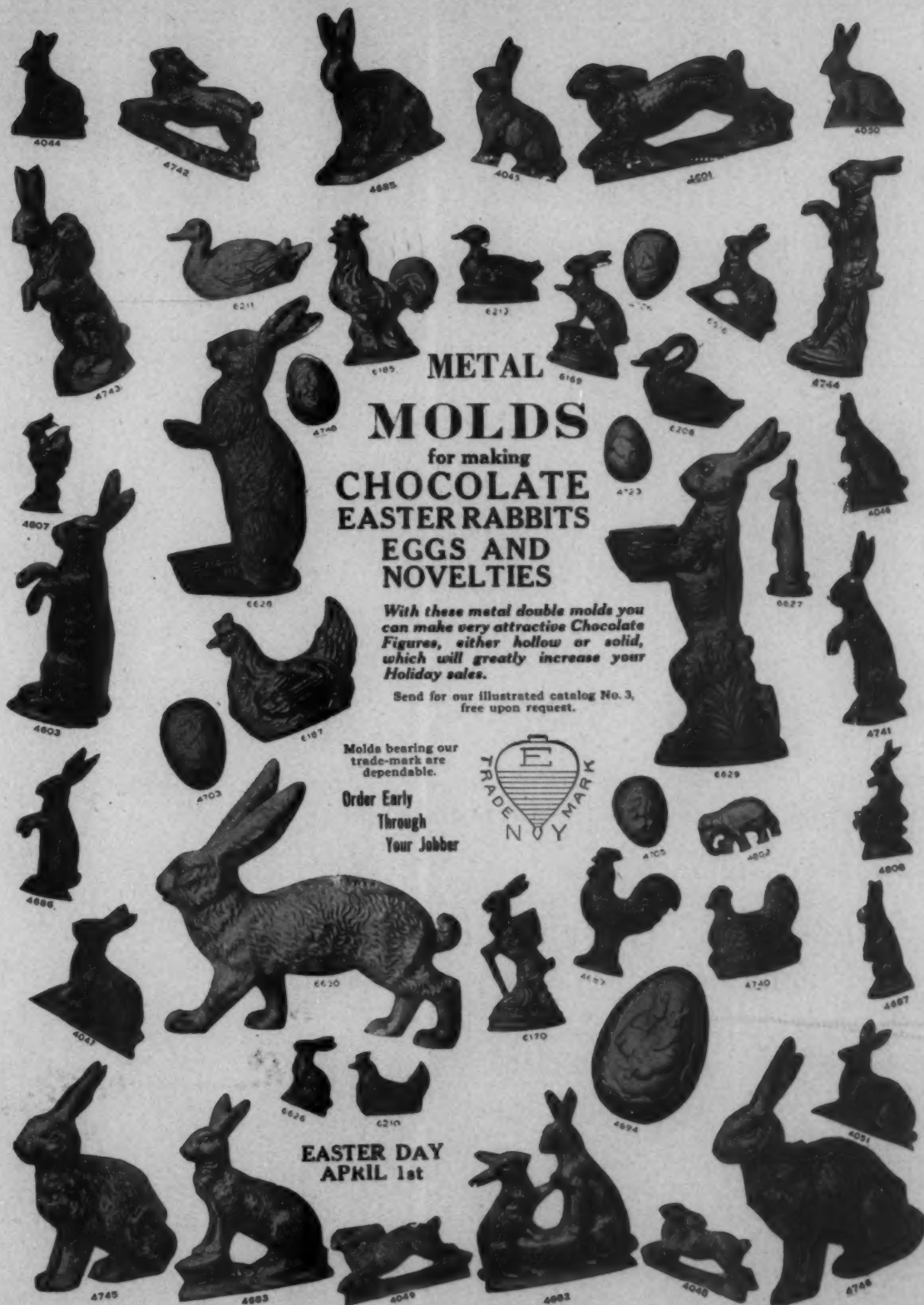
**W. L. FLEISHER & CO., Inc.**  
NEW YORK CITY  
Design and Install all  
**STURTEVANT-FLEISHER**  
Air Conditioning Systems



**Sturtevant**  
PUTS AIR TO WORK







MANUFACTURED BY

**EPPELSHEIMER & CO.**

34-44 HUBERT ST.

Dept. F

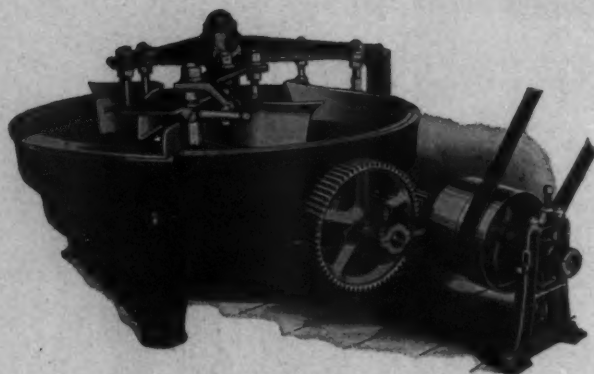
NEW YORK

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# **"You can't beat 'em"**

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## **The Ball and Dayton Cream Beaters and Coolers**



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### **The Dayton Beater and Cooler**

References, detailed description and prices  
on request.

Fully protected by patents.

Beware of imitators and infringements.

---

President Harris says: *"We cannot avoid competition, as it is inevitable at all times, but we can prepare ourselves to meet it, and the equipment for such preparation will not be the apparently easier method of cutting prices, but by attaining more efficiency in each department."*

The Ball and Dayton Beaters are proven time-and-money-savers while producing just the kind of work which the finest quality goods demand.

**The Answer: Lower costs and more profits.**

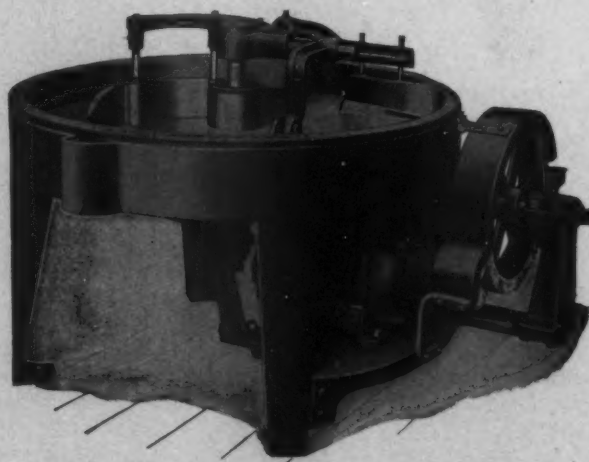
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### **The Ball Beater and Cooler**

The above illustration shows motor attached to machine with gear drive. This can be applied to either our 3, 4 or 5 foot Ball machines, also our 5 foot Dayton machines. Price upon application.

Notice the rigid and substantial construction of the motor attachment.

---



Send for descriptive literature on entire line giving sizes, capacities, horse-power required, speed, weights, details of construction and net prices.

---

**THE BALL CREAM BEATER CO.**  
DAYTON, OHIO

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# *Our New Year's Message to Superintendents and Operators*



FOR over thirty years this organization has been engaged in designing and building improved mechanical devices for use in candy and chocolate factories.

As evidence of how thoroughly we planned and built, many of our original machines are still in daily operation. Each new device produced has been a step in advance along the line of quantity and quality production, with an equally marked improvement in economy and sanitation.

Our engineering department has accumulated valuable data and first hand experiences which cover the entire range of candy manufacture. The best that we have in helpful suggestions and advice is freely placed at the disposal of any candy Superintendent or Operator. Whenever a question of method or procedure arises in your plant, let us supply the answer.

## **NATIONAL EQUIPMENT COMPANY**

**Largest Manufacturer in the World of Chocolate and Candy Machinery**

**SPRINGFIELD, MASS., U. S. A.**

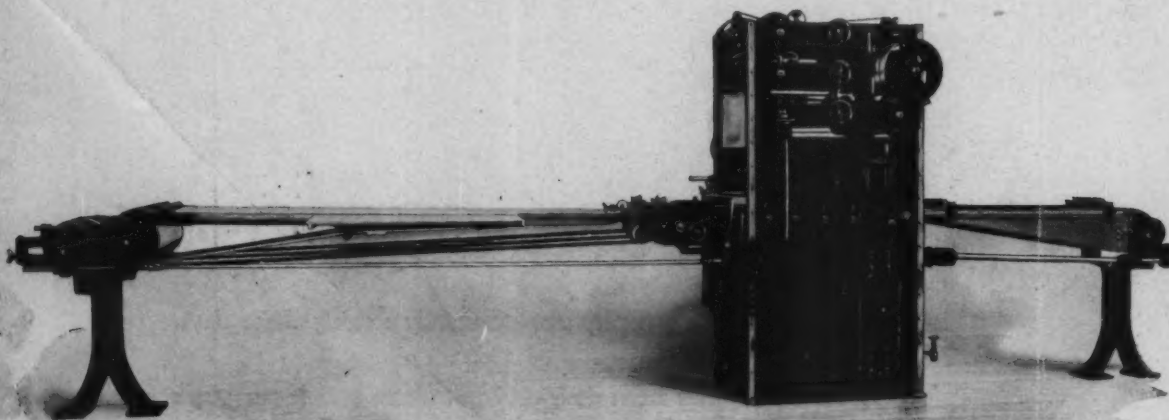




# *The Enrober*

## *A National Equipment*

*Gives increased production  
—at low cost*



THE Standard Enrober does the work of 15 to 40 hand dippers. By its use you get: a big saving of floor space; a more uniform and sanitary output and an ability to execute your orders quickly and economically. Will coat centers or pieces of almost any size or variety.

Used by all of the largest chocolate coating candy manufacturers in this country and abroad.

*Write for illustrated pamphlet  
which tells you all about it.*

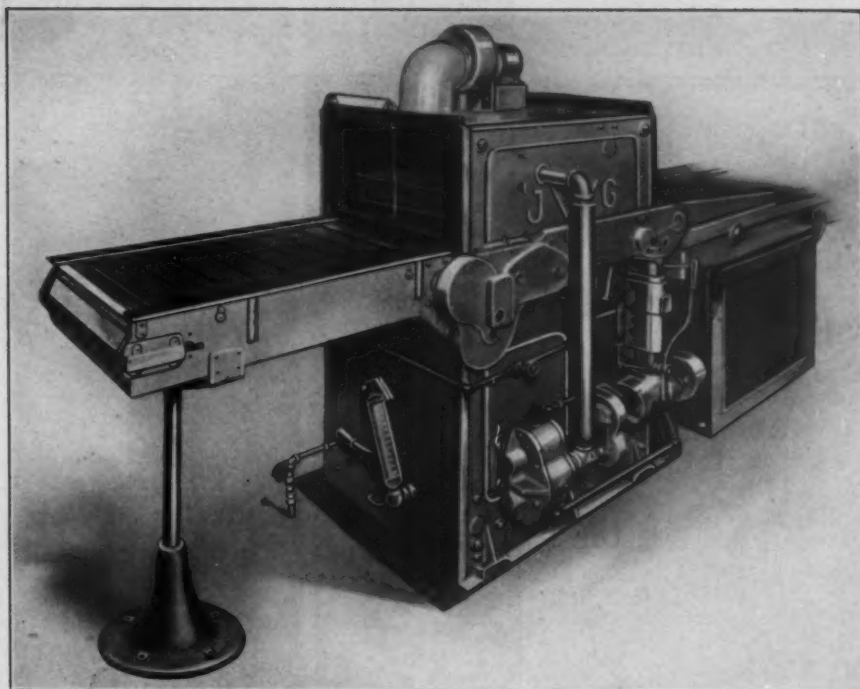
## **NATIONAL EQUIPMENT COMPANY**

**Largest Manufacturer in the World of Candy and Chocolate Machinery  
SPRINGFIELD, MASS., U. S. A.**









## The Greer Coater

THE pages of machinery history are constantly turning these days. Youth is supplanting age.

The Greer Coater has been designed to do more and better work with less effort and at lower cost, to assure accuracy, and to handle a wide variety of goods.

This machine combines all the best features and has been designed with certain exclusive advantages which manufacturers and operators alike are quick to appreciate.

Every requirement of an up-to-the-minute Coater is fully met and every precaution is taken in constructing it to assure accuracy, operating convenience and durability. The elimination of all unnecessary parts is one of the factors that makes the Greer Coaters so all-around satisfactory. Point by point this earning power of the various features we have developed has made the machines a gilt-edge investment, besides which they are backed by a gilt-edge guarantee.

*J. W. Greer* President  
J. W. GREER COMPANY



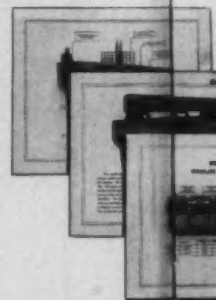
# Announ *The* GREER COATER- and Packing Unit



## A Complete Unit—Coating, Dry

*The Chocolate Coating Machine Unit th Ca*

**T**HE J. W. GREER CO. has designed and produced a Chocolate Coating machine that *Automatically* delivers the goods onto the *Greer Drying, Conveying and Packing machine*, which forms the only modern and efficient unit on the market for coating, drying and packing centers. Modern confectionery manufacturers will have no place for the old, inefficient methods of coating centers, with the waste and losses and frequent service interruptions. The features of the Greer Coater embody the latest ap-



Let us send you literat

119-137 Windsor Street

# J. W. GRE

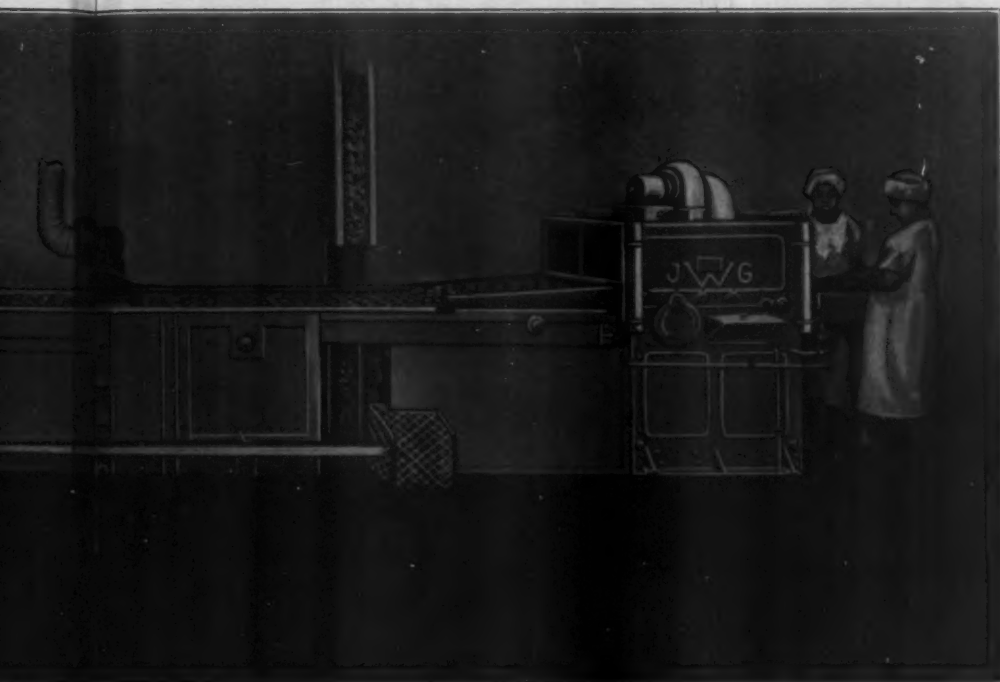
Manufacturers of Confectioners Ma





ouncing

**R** *A Triumph as a Production Unit*  
*the last word in machine design and performance*



## g, Drying, Conveying and Packing

*Unit the Candy Industry Has Been Waiting For*

proved ideas and also some improvements which are exclusively a part of these machines. This machine gives 200 sq. ft. cooling space, allowing the goods to travel 80 linear ft. yet successfully accomplished in 20 ft.

The Greer Coater and Packing unit represents the greatest advancement in chocolate coating that has been made in years. A man who purchases Automatic Chocolate machinery may consider he has made a sound and lucrative investment—not an expenditure.

We give an absolute guarantee that our machine does not infringe any existing patent.

and you literature and prices

# GREER CO.

CAMBRIDGE, MASS.

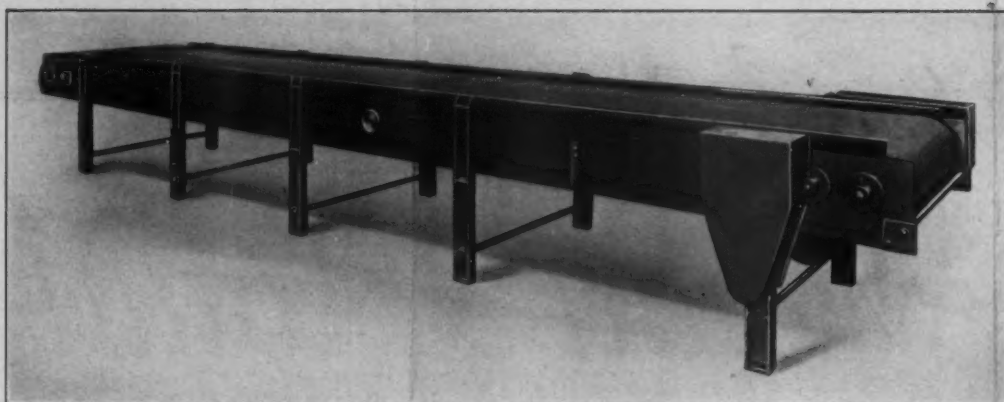
ectioners Machinery that Pays Dividends



Issue of January, 1923

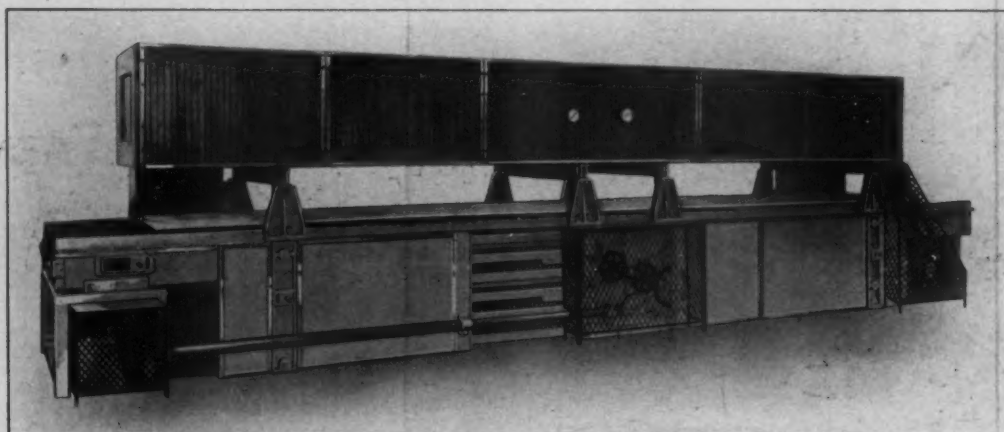
(53)

The Candy Manufacturer



### Greer Shaking Table

Will assist in raising to the center of the bar the almonds or nuts which have been placed in the mould previous to the chocolate deposit. Shakes air bubbles out and gives a level, uniform bar.



### The Greer Chocolate Bar and Ten Pound Cake Machine

Guaranteed to produce from 6 to 8 tons per day

The best machine made. In 25 ft. x 5 ft. you get a travel of 110 ft., and 360 ft. of cooling space. Why use a long tunnel and waste refrigeration when you can get better results with a Greer in one-third the floor space.

*Standard Equipment for Chocolate Manufacturers*

**J. W. GREER CO.**

CAMBRIDGE, MASS.







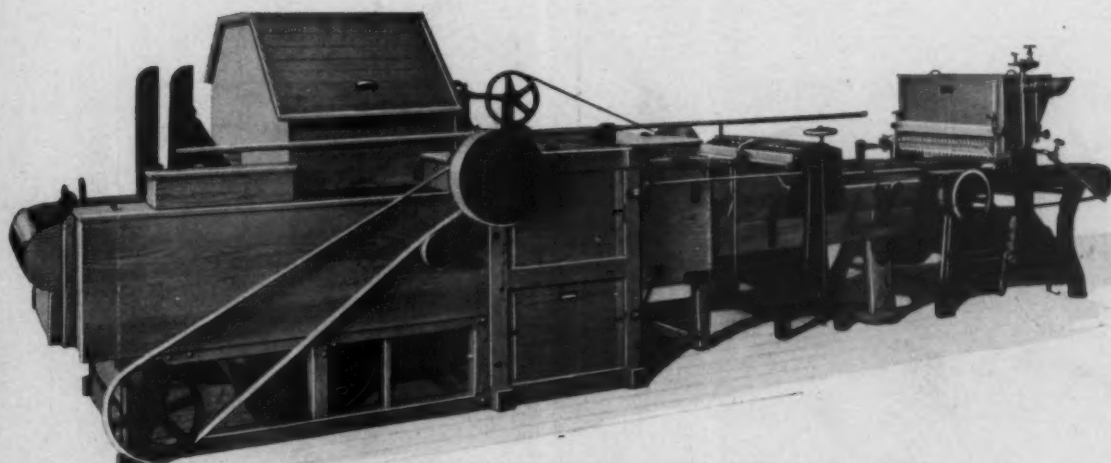




# *The Wood Mogul*

## *A National Equipment*

*Does the work of three machines  
—with big saving of labor and space*



THE Wood Mogul combines the starch buck, printer and depositor—working in continuous, automatic operation, saves floor space, labor, material and money.

Three men and the Wood Mogul will do what it takes five men and these three separate machines to do. No lost time between machines.

Cleans the softest centers without injury, operation practically dustless. Hundreds in daily operation in candy factories of the world.

*Write for interesting illustrated description.  
Our engineering department is at your service.*

## **NATIONAL EQUIPMENT COMPANY**

**Largest Manufacturer in the World of Candy and Chocolate Machinery**

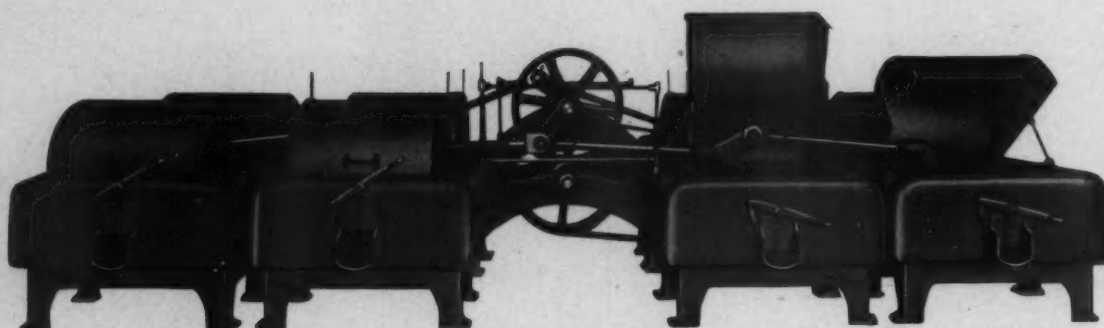
**SPRINGFIELD, MASS., U. S. A.**



# *Tandem Conge*

*A National Equipment*

*Giving larger capacity  
in limited floor space*



**HIS** is our standard four-division Conge with four pots added, operating by an additional stroke arm—a new feature.

The Tandem Conge may be had complete, or the additional pots added to the Standard Conge already installed, the only extra space required being for the pots. The same driving mechanism is used.

Of special value to the manufacturer with limited floor space.

*Write our service department  
for particulars*

**NATIONAL EQUIPMENT COMPANY**

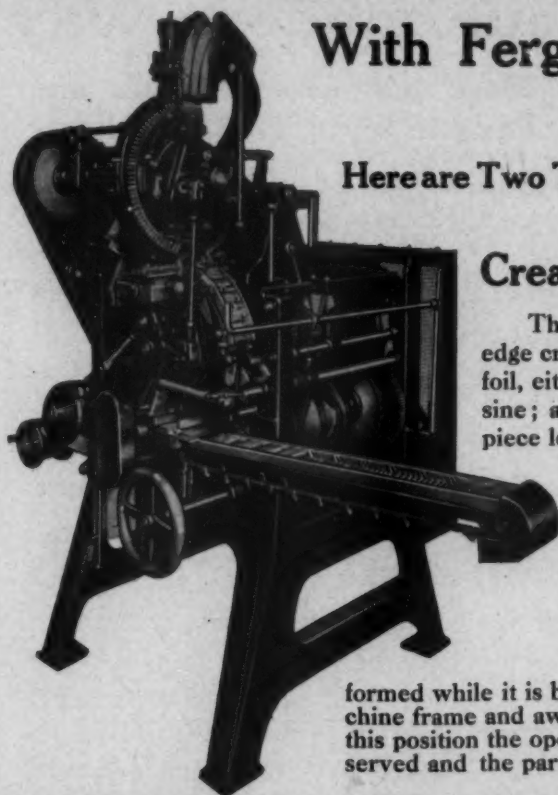
**Largest Manufacturer in the World of Candy and Chocolate Machinery**

**SPRINGFIELD, MASS., U. S. A.**

# Cut Your Production Costs

## With Ferguson & Haas Wrapping Machines

Here are Two Types that are Proven Money-Savers



### Cream Cake Wrapping Machine

This machine was designed for wrapping beveled edge cream cakes and is used for wrapping articles in foil, either plain or reinforced, also paper waxed or glassine; and placing a printed band or label around the piece lengthwise, pasting the seam.

The style of wrapping produced on this machine enables it to completely cover the piece with a minimum amount of wrapper. The saving effected from this feature alone over any other style of wrapping when foil is used amounts to several hundred dollars per year.

The actual wrapping of the piece is performed while it is being carried in wheels located outside of the machine frame and away from the cams, gears, etc., requiring oil. In this position the operation of folders and other parts is readily observed and the parts are accessible for adjusting and cleaning.

### Machine for Small Confections and Other Products

Wraps in foil, waxed or glassine paper and bands, sealing the bands. Also developed for wrapping with printed foil, glassine or waxed paper without band, and to register the printing.

*Every machine guaranteed to fully meet all claims made.*

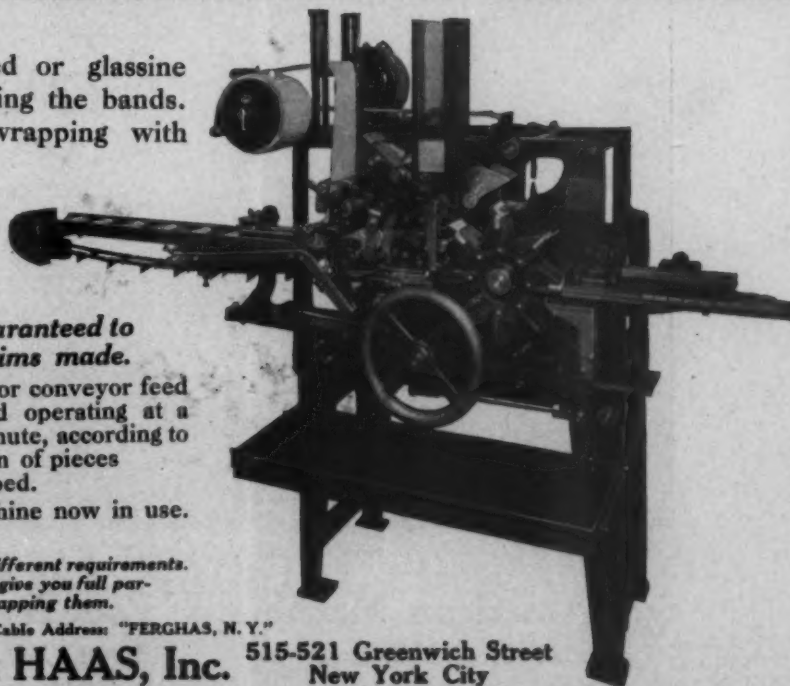
Equipped with magazine or conveyor feed and delivery stacker and operating at a speed of 70 to 110 per minute, according to shape and condition of pieces to be wrapped.

Over 50 of this type machine now in use.

*Other wrapping machines for different requirements. Send us samples and let us give you full particulars in regard to wrapping them.*

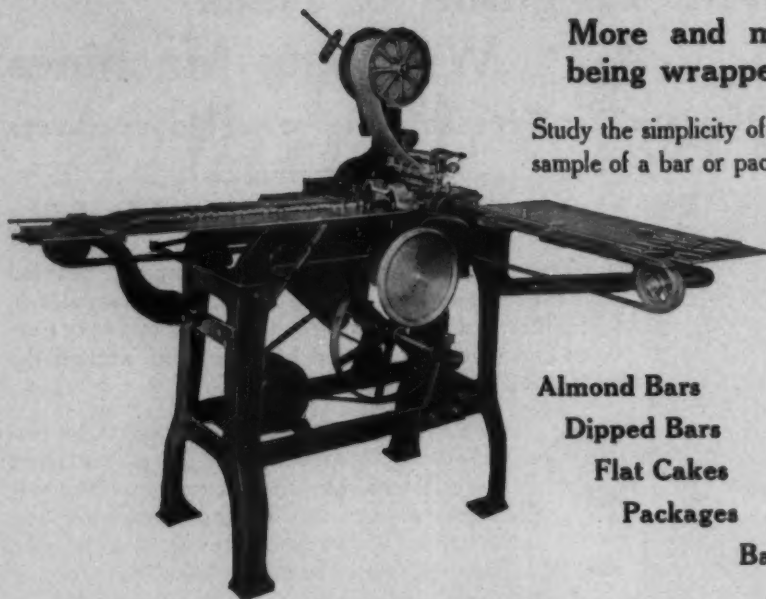
Cable Address: "FERGHAS, N. Y."

**FERGUSON & HAAS, Inc.** 515-521 Greenwich Street  
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# DAY BY DAY in our modern way



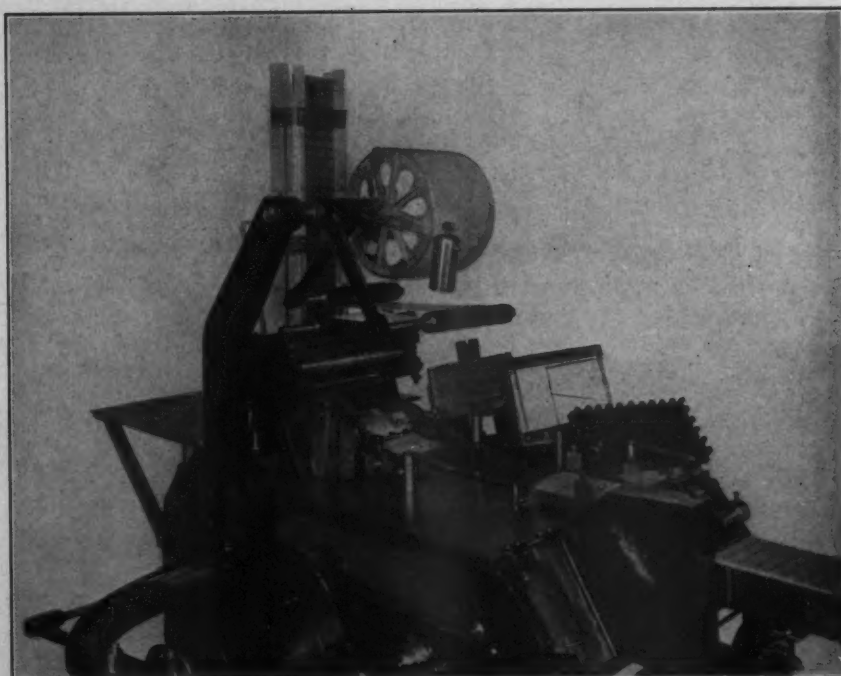
More and more packages are  
being wrapped by our machines

Study the simplicity of these machines and send us a  
sample of a bar or package for full information, which  
we will be glad to furnish  
without charge or obligation.

Almond Bars  
Dipped Bars  
Flat Cakes  
Packages

Waxed Paper  
Glassine Paper  
Printed Paper  
Tin Foil

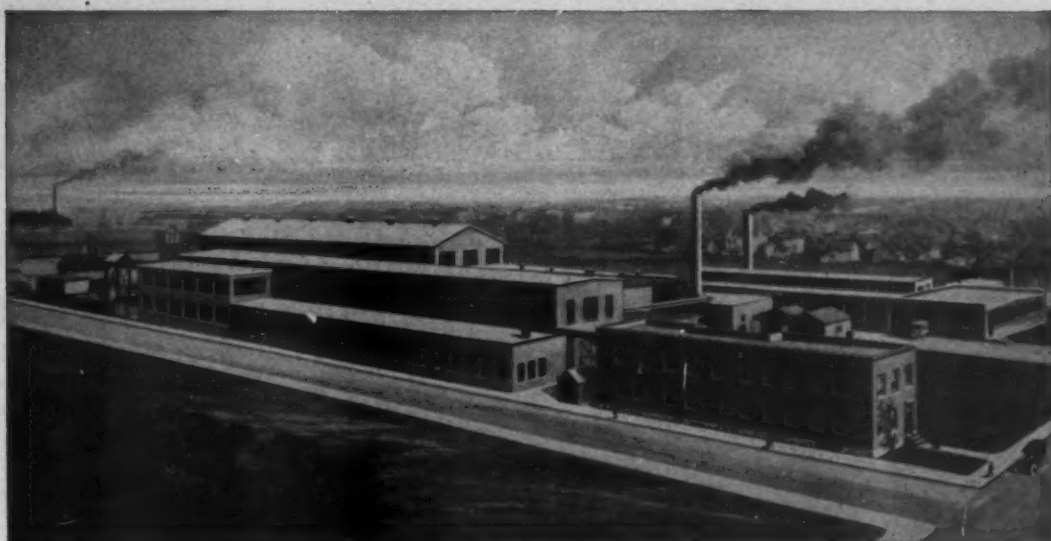
Band Labels



HEAT SEALING MACHINE

**American Machine & Foundry Co.**  
5520 Second Avenue      BROOKLYN, N. Y.





Plant of J. P. Devine Company, Buffalo, N. Y.

## ***Mr. Superintendent:—***

Equipment that will help you get better results from your factory hands in 1923:

**Starch Drying and Reconditioning Equipment**—eliminating hotrooms, excessive heat and doing away with discolored starch; installed in the largest factories in the country.

**Five Roll Steel Refiners**—large size—greatest capacity.

**Continuous Vacuum Cookers**—[See following two pages].

**Plastic Presses and Automats**—most modern installation for the productive manufacture of filled goods of quality.

**Improved Chocolate Moulding Machines**—endless.

**Air Conditioning and Refrigerating Equipment.**

*A large assortment of used candy and chocolate machinery always kept in stock (see our ad on page 99.)*

## **CANDY AND CHOCOLATE SPECIAL MACHINE COMPANY**

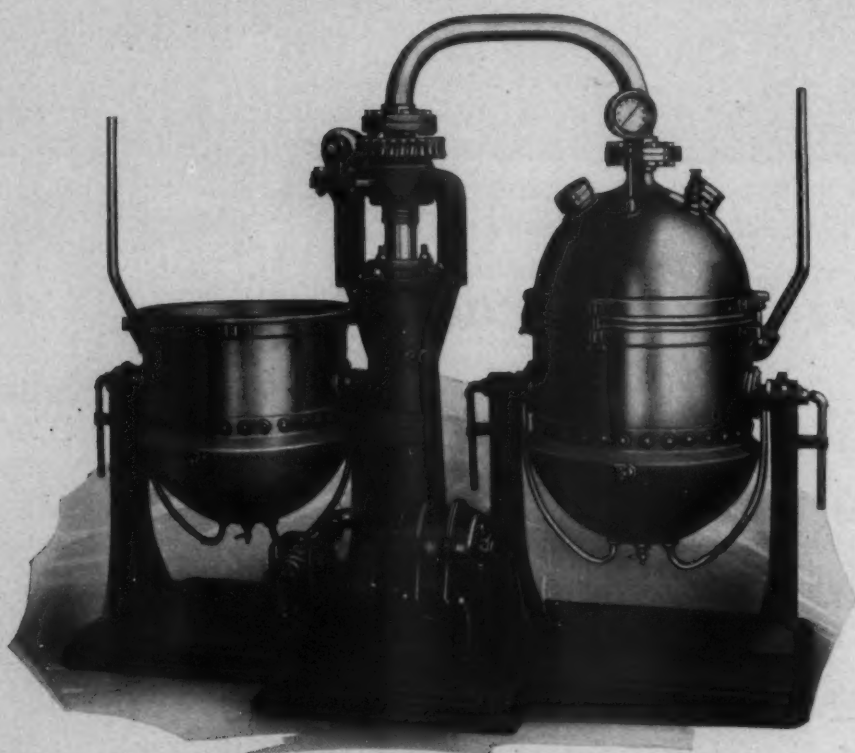
INC.

39 Cortlandt Street

New York City

# The Devine Superior Contin

For Dryer, Whiter, Clearer and Hig  
Will Cook to Perfection Straight Sugar  
FOR STEAM



Rear View of a Complete Unit. Simple to Operate.  
Capacity 200 lbs. per charge.

Constructed to give results in quality, quantity and economy in fuel and upkeep.

Eliminates pumping, transferring and graining—*No Cloudy Batches.*

*A Machine for Saving Money and Time.*

Detailed Information Upon Request.

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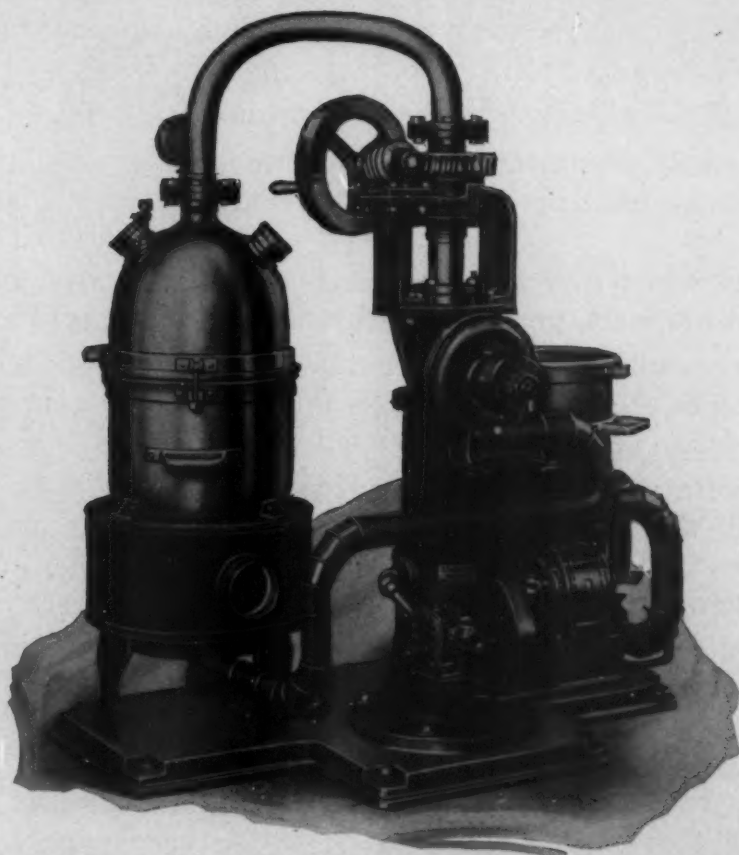
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*Selling Agents for the Candy and Chocolate*

CANDY AND CHOCOLATE SPECIAL MACHINE CO., INC.

# Continuous Vacuum Cookers

and Highest Satin Finish Hard Candies  
Sugar Any Mixture of Ingredients  
FOR GAS OR COAL



Cooker furnished complete with two Portable Kettles, Swinging Vacuum Dome, Condenser and Motor-driven Vacuum Pump, two Gas Furnaces with Motor-operated Air Blower and Permanent Pipe Connection, all mounted on Continuous Cast Iron Base Plate, ready for gas, water and wiring connections.

Each Kettle alternately used as Melter and Vacuum Cooker, without transferring syrup, preventing grained and cloudy batches.

Capacity, 100 lbs. per charge.

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FALON NEW YORK

*Candy and Chocolate Industry*

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# The Policy on which so many successes have been built

**T**HE greatest modern successes have been built on a policy of concentrating upon a few "best sellers" made in great quantities by automatic machinery.

In the candy industry you have chewing-gum, chocolate bars, candy kisses, for example.

**Candy Kisses** offer you the best opportunity.

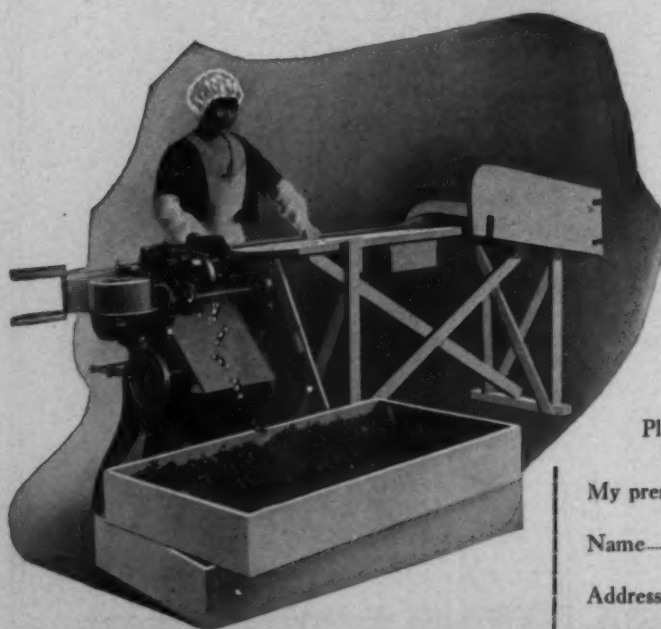
With a small investment, and no increase in factory facilities, you can quickly build up an unusually profitable business of large volume.

One kiss-cutting and wrapping machine does the work of 8 to 10 hand-wrappers, producing 800 pounds of kisses per day.

You have a selling advantage from the start, for the Model K enables you to produce a better kiss for at least one cent per pound less than competitors who wrap by hand.

You have a growing business. Kisses are becoming more popular all the time. This, combined with low cost makes selling easy. Some manufacturers have increased their business several times, turning over their capital 8 to 10 times a year.

We want you to have all the facts about the candy kiss business. Mail the coupon NOW!



## THE PACKAGE MACHINERY COMPANY

SPRINGFIELD, MASS.

NEW YORK  
30 Church Street

CHICAGO  
111 W. Washington St.

(COUPON)

**PACKAGE MACHINERY CO.,**  
Department K, SPRINGFIELD, MASS.

Please send your book on the Candy Kiss Business.

My present business is.....

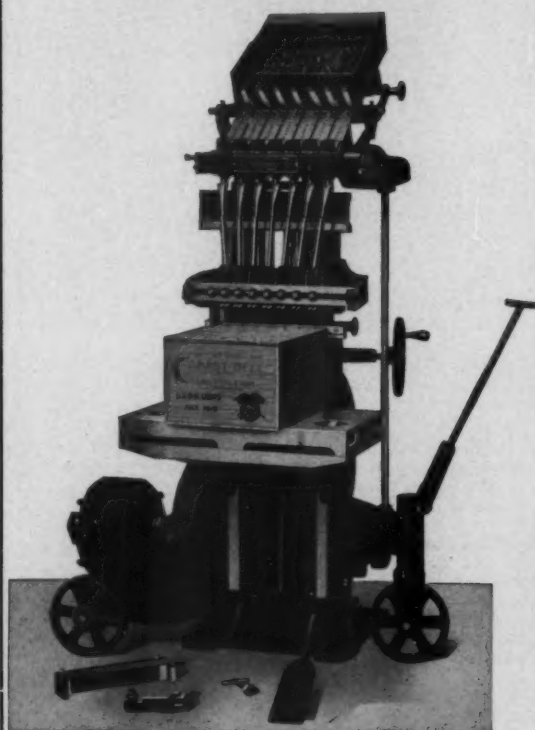
Name.....

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# A Gang of Seven

HAMMERS IN ONE  
Saves You Money  
IN NAILING BOXES



## No. 7 Morgan Nailer, Motor Drive, Mounted Portable

Will drive from one to seven nails at each stroke.

Mounted portable, can be readily moved about the factory.

**Machine Nailing  
Makes Better Boxes**

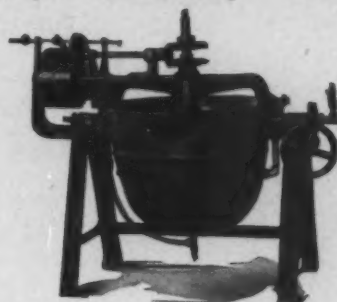
*Write Today For Information*

**Morgan Machine Co.**  
Rochester, N. Y.

# Bucyrus Copper Kettles

have given dependable service since  
1874. Their design assures—

**Safety—Durability—Economy**



Steam Jacketed Tilting Kettle

*Our Prices will interest you. Get them!*

**The Bucyrus Copper Kettle Works Co.**  
Bucyrus, Ohio

Also Manufacturers of  
MIXING KETTLES, COPPER CANDY PANS  
and BUCYRUS REVOLVING PANS—  
the last word in production machines.

# Sugar vs. Salt

They may look alike—but they are not  
alike—and no more is our method of  
candy making like the old way.

Why not find out about our way; our  
book tells the whole story. We'll send  
you a copy if you will send us your  
name on a postal.

**Our Book**

## Make Better Candy For Less Money

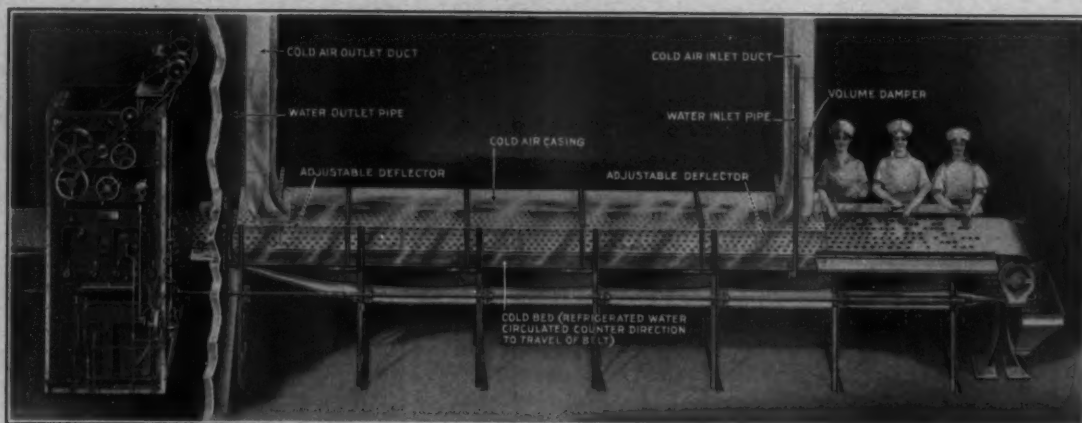
has helped many a candy maker turn  
out a better product and do the work  
at lower cost.

**Improved Appliance Co.**  
413 Kent Avenue      BROOKLYN, N. Y.

# The "Coldbed" Chocolate Drying and Packing Table

Directly Connected to Enrober

Patents Pending



## FROM THE ENROBER TO THE PACKER WITHOUT ANY HANDLING

The Enrober delivers its product directly to the belt on the COLDBED Table and, after traveling a distance of 25 or 30 feet in six or seven minutes, the goods have become properly set and chilled, ready to pack. The gloss is unsurpassed and the bottoms have the same fine finish as the top. Packing is done directly from the table.

In operation, the carrier belt travels in immediate contact with a hollow metal table, through which refrigerated water is constantly circulated, so that the bottoms of the chocolates are properly cooled and set. At the same time refrigerated air is circulated through the surrounding casing in direction opposite to the travel of the belt. The air is constantly recirculated in a closed circuit and can be maintained at a much lower temperature than the surrounding atmosphere of the room, securing greater efficiency without discomfort to the operators.

By regulating the flow of the water a perfect relation can be maintained between the temperatures above and below the material.

Perfect results are obtained in such a simple, practical, common sense way that the method will be instantly appreciated by every practical man. With the "COLD-BED" Packing Table there is no intricate machinery. No mechanical parts to get out of order. It is foolproof.

The entire equipment takes but little floor space. It is only twenty inches wide and thirty feet long, including the packing space for six operators. The table being made up in sections, it can be lengthened or shortened at will, so that it can be adapted to a restricted space or to a greater speed of the enrober.

The "COLD-BED" Table is much less expensive in first cost than other methods and also in cost of erection.

The goods having been properly chilled throughout, retain their color and their gloss without any deterioration after packing.

Repeat orders show satisfied customers. (WRITE FOR BULLETIN CB-140)

INCREASED PRODUCTION

REDUCED COST

IMPROVED QUALITY

Also Manufacturers of  
The Bentz Air Conditioning Apparatus  
The "Chillblast" Refrigerating System  
(Patented)  
The Bentz Drying Methods for Starch Rooms

## BENTZ ENGINEERING CORPORATION

Main Office: 90 West Street, New York

Factory: Newark, New Jersey







## An Appeal for Better Machinery

by Clifford Clay

Many of our readers know Mr. Clay through his connection with the Service Department of American Sugar Refining Company several years ago. Until recently Mr. Clay was superintendent of Brooklyn plant of Beech Nut Packing Co. This little "impromptu" was taken from one of his recent letters but we will have a "regular" article from him in an early issue. Mr. Clay is one of the "thinkers" in our industry. We will hear from him again shortly.—Editor.

**A** GENERAL discussion of candy machinery would be a matter of volumes not of columns, but there are some things which warrant thought from all users.

To the old time candy man the machines of today are wonders of efficiency and mechanical genius. We who use them constantly think they are right. We fight over trivial differences in action between those of different manufacture.

Why then do men familiar with the equipment in other lines of production laugh at the primitive methods we use?

A careful study of each machine shows that engineering effort has not been directed toward accomplishing the desired result most easily and quickly but at imitating as closely as possible the action of men doing the work by hand.

There are a few notable exceptions to this statement. The enrober, some continuous cookers, etc. are actual departures.

Some of the chocolate machinery is modern but most is simply the old stand-by of two hun-

dred years ago showing greater size and occasionally better workmanship.

This sounds discouraging but there are better things coming.

The wrapping machine is new in conception and therefore far ahead of the production machines in the movements and results. Certain fundamentals are still disregarded. Many of the machines for wrapping brittle candy have moving controlling parts below the passing goods. This is all wrong. For a solid box it will do but where there is a chance of bits of candy or nuts falling into the gears and cams, it is impossible.

Pick a machine with as few moving parts as possible. One in which every movement is positive and dependent only on its parts. One in which every moving part is readily accessible and cannot be affected or disarranged by the breaking of passing goods.

After your machines are purchased and you have seen your own operators producing satisfactorily with them, get a good machinist and post the following notice:

**NO EMPLOYEE SHALL OIL, ADJUST, CHANGE OR REPAIR ANY MACHINE UNDER ANY CIRCUMSTANCES.**

Make your good machinist responsible for the continuous and efficient operation of every machine. Hold him to that responsibility and enforce your notice. If this is done, sixty per cent of your machine trouble will be over. When more modern machines are procurable the other thirty per cent will disappear.

## Some Random Thoughts for Superintendents and Managers

by A. G. Dean

Mr. Dean is an Industrial Engineer—at present Works Manager of one of the foremost chocolate manufacturers in America

**A**N OPPORTUNITY to appear in print and select your own subject carries with it an appeal to write something worth while, not only to interest readers but to start them thinking along constructive lines.

With this in mind I wish to pen a few paragraphs loosely joined together, trusting that each paragraph will have something in it, like the packages in a Christmas stocking, of varying values to those receiving the gifts.

Production is a very elusive subject; in fact some things are not worth producing and are prescribed by law.

We must first then decide to produce something worth while, a salable commodity of value to the purchaser, consumed with pleasure, leaving only a lingering desire for more, for production depends on repeat orders. Thus having

eliminated the sales department by one fell swoop of the pen, we have decided to produce goods of such quality and good taste that they will sell themselves to an ever enlarging circle of friends.

I am prejudiced in favor of clean factories and I know that this means constant care and expense on the part of the cleaners, employees and management.

Not always expense without profit, for often there is a saving in better handling of materials by conveyors, automatic machinery and continuous operation; that is the indirect result of operating a clean factory. Study cleanliness and prevent waste.

Waste may be found in all departments. Too large a line produced under small quantity production is the largest general cause of waste.

Save by producing in quantity the kind of goods most suitable for the factory to produce. Quality and Quantity at low sales prices will produce business where quality at high prices fails for want of a volume of sales. In line with the above, low prices do not mean cheap goods. Cut out the extras in material, handling and waste. Put the saving into quality of the food product at a lower price. You will see that the increased demand will multiply the profits.

While we are talking of profits let us trace some of the profits back to the source and share it with the producers in the factory in any way that you please, to show appreciation for their efforts and a desire for their co-operation. They know they earned it; it is not a gift.

Waste, again, comes largely from having the wrong man on the job. Let skilled workers apply their skill, assisted as far as practical by the unskilled. Too frequently I see the skilled worker in nearly all lines doing work, hour after hour, that can be better and quicker done by brawn than brains, and best done by a combination of the two.

The opportunity of the unskilled lies in assisting skilled workers, while the opportunity of the skilled lies in multiplying quantity of production under mechanical means. This means taking time and thought to work out new ideas in processes and methods of production;

to save in costs in time and process, labor expended and overhead, including equipment in use per unit of production.

Waste, once again, is often seen from the worker's point of view of their own work. They wait for orders for material, for instructions. They handle and re-handle materials. Why?

In many jobs there is time to think, and many men do think beyond the circle of their immediate activities.

Are your employees thinking of the progress of your organization and are you benefiting by their thoughts? Waste in productive thoughts and planning lost by not putting to use is overlooked and does not appear on the profit and loss sheet, but it is there.

One more point of view and we are through, ready for the editor to cut out and patch up our written sheets until they will look like patch work quilts with mixed colors of his ideas and our ideas.

The worker looks up to the men higher up and his judgment is keen and true. He knows what you think; he sees how you act and he wonders "why!" very often.

Are you as manager fulfilling your obligation to him as well as he is filling his obligation to you? Considering of course your greater opportunities and that he is somewhat limited to carrying out your orders.

## A Cost System That Proved Practical for a Small Factory

by J. B. Paist

Factory Manager, F. M. Paist Company

**I** GIVE this article the above title because I wish to show a manufacturing cost system that I have used for years for my own personal knowledge; not that it is absolutely accurate and immune from error, far be it from that, but because of the close touch it brings between the superintendent and his department chiefs.

We all know that if a foreman or forelady knows that we know at the end of each week how the payroll figured in their department and that their remuneration depends on its figuring on the right side of the ledger, their efforts will be far more sincere and effective than simply the feeling that they have done a week's work not knowing whether they were a success or a failure.

Let's take for example the Cream Department, a department that most likely is run on the weekly wage scale, not piece work. This department perhaps makes quite a variety of centers, some single cast, some double cast, some very light and small, some very heavy and large; so we must have a different cost of production for the varying kinds. We will say some can be made for  $\frac{1}{2}$ c per pound, some 1c per pound, some  $1\frac{1}{2}$ c per pound, etc. (If

you are making count goods of any kind, they may be figured by the number of boxes from a certain size batch.) Having now established a mental cost, let's see how it figures from a real productive standpoint for one day's work.

2,000 pounds at $\frac{1}{2}$ c.....	\$10.00
2,000 pounds at 1c.....	20.00
2,000 pounds at $1\frac{1}{2}$ c.....	30.00

Per day .....\$60.00

If this is produced each day for the week of 5½ days, our payroll should be \$330.00 for the Cream Department. We now examine our payroll book and find we really paid \$375.00, thus showing a loss of \$45.00 in this department for the week. Now we can get busy and find why this loss.

In the departments where piece work is our basis, our figuring is just the same excepting we must add a fraction of a cent to each operation to pay for the forelady and helpers, then figure the amount produced each day and compare it with our weekly payroll. It is very simple to know where we stand.

This constant knowledge keeps each department head on their toes, making the superintendent's duties as a detective considerably

less. Each forelady and foreman keeps his own daily output; the time for entering their production does not exceed 10 minutes per day. This is then turned over to the superintendent and in less than one-half hour he or his office assistant can figure in dollars and cents the day's output. At the end of the week add each day's cost together and compare it with the total payroll and you will have a pretty close account of your production costs, at an expenditure of not over \$3.00 per week.

This simple system is not meant for the purpose of establishing the exact cost of manufacturing confections to be used for the purpose of fixing a selling price, but for the superintendent's daily and weekly knowledge as to his working costs compared to the office figures showing what the costs should be; and above

all, an electric wire to each head to keep them everlastingly on the job.

There are, no doubt, many of you who have systems just as good or better than this one, but those who have none, or a poorer one, will, if they persist with some simple cost system, be surprised at the inside knowledge they gain of their own business and at how soon they can almost tell by walking into a department whether it is figuring correctly or not.

In conclusion I will admit frankly that this little plan is not the best to use in a factory whose output exceeds 100,000 pounds per week distributed over a large number of complex manufacturing departments; however, it is none the less practical, consistent with the purpose it serves, for the small factory.

## Behind the Factory Door

### The Superintendent's Ideas

*From "The Cracker Baker"*

**A** superintendent to be successful today must be a real leader of men, not a driver. The plant with the superintendent driver has the most labor difficulties.

I remember a few years ago, when I was working as a peeler in one of the large biscuit plants, the superintendent caught me feeling a dough one day and he immediately asked me what I was doing. He said, "Don't let me catch you doing that again." That was the spirit that prevailed in those days. No chance for promotion, no encouragement offered you, no opportunity to learn anything about wheat, or any of the other raw materials that entered into the product you were making.

But how things have changed! Today the biscuit plants have good literature scattered throughout the establishment on subjects pertaining to the industry—the "Cracker Baker" furnished free to all department heads, and when an ambitious employee starts to deliver more than he receives it does not take long before he sees an appreciation of same in some way that will please him.

The superintendent who causes his employees to dislike him, because of unfair criticism, snap judgment and always being ready to find an excuse for his own mistakes, never improves the morale of his organization.

Be plain, of good character, don't do anything in your plant you don't want your help to do, be kind, considerate and just to all and your organization will grow and prosper.

When you have worked out a problem that is a success, explain it to your help, show them the advantage to be gained by co-operation, tell them how much they will benefit by co-operation with the heads of the various departments.

Have weekly meetings of all your various department heads, getting the general manager as often as is possible to sit in these meetings. Explain to the various department heads the mistakes their department has made, and show them how to avoid them, how to improve quality in their various departments, increase production per man, or girl, or machine. Show them that increased output means

increased salary, for after all we all are working and striving for the dollar.

Then I am sure you will have a happy organization.

The responsibility of leadership in an organization rests entirely with the Superintendent, and he is responsible for keeping up the quality of the products. I will ask, "What have the large manufacturers done to teach their willing employees anything pertaining to the baking business?" Here is my idea how to get young men to enter the biscuit game today:

Establish a school of from four to five hours per week, the superintendent and his various department heads to be the teachers, along with some little outside talent that you would have to call in, studies to be:

Baking Technology—Shop Management—and all technical studies of all raw materials entering into the cracker industry.

I believe a better spirit would prevail among the employees and they would take more interest in their work, by the happy faculty of trying to do something for the men who are employed in the industry.

Some men will say, "Yes, but look at my trade secrets, my pan wafer, my marshmallow formulas, and other things that I have developed—what of them?"

There are no secrets in the baking business; anyway, we can't take them with us when we die, so why not help the young man who is coming along and will have to fill our shoes when they lay us up on the shelf? Every man in the baking game today should depend on the other. All of us are working for each other. Each man's effort is a link in the great chain of co-operation in making better goods and employing better methods, thereby increasing consumption of biscuit products in America.

I hope to be able to see the day when the cracker industry will take such steps, and anything that is possible for me to do further such a cause, I will gladly lend my aid and experience.

JACK GRAY,  
Superintendent The Lakeside  
Biscuit Company.



## Foremanship

(Continued from page 34)

23. *Give them by your own methods, your efficiency and attitude toward the company and the work to be done an example they will want to follow (example).*
24. *Answer questions, explain obscure points, see that they understand everything pertaining to their work (information).*
25. *Handle grievances, complaints, avoid misunderstandings, ill-feeling, etc. (adjustment).*
26. *Encourage suggestions as to improvements (suggestions).*

### Developing Effective Teamwork

Prompt coordination, cooperation, and team work are necessary to insure the proper running of a department. Work must be done expeditiously; delays, confusion, and hesitation are frequently serious in their effect; each person in the organization must be trained to function in perfect harmony with the other members. There is no more important element in the work of any foreman than the organizing and handling of his working force. It requires a high degree of tact and diplomacy, judgment and decision, foresight and planning. He must know how to keep the force in good humor, to avoid friction, to handle grievances so as to leave good feeling. Firm, even, and unwavering control and discipline must be maintained without harshness, irritation, or resentment.

The foreman of today is really a *leader* rather than a driver. He accomplishes results through leadership *because he has secured the confidence and respect of the workers* and because he inspires them to do their best and to turn out work of the right quality.

There are, of course, still some men who belong to the old school and cannot learn the new ways of a more advanced era. They cling tenaciously to old methods and wonder why they no longer secure results. We must all realize the new order of things in handling our working force. Plenty of men are today maintaining firm discipline, getting thorough cooperation and accurate work from their people under the newer methods, and these are the men who are going ahead and being placed in charge of departments with the larger number of workers.

### Executive Ability

6. If we pause in our consideration of the foreman's duties for a bird's eye view of all he must accomplish, we must realize that to keep his department running smoothly, to get his work out on time, to maintain both quality and quantity of work, to keep down his costs, he must not only know his job but must also develop his executive ability. It is easy to use this term — executive — without "getting" its true meaning.

In its essence it means the power to visualize as a whole and in detail the work to be done, sensing the essentials in their proper order, and arranging for their execution on time by the right persons, in accordance with the established standards of quality and cost. All this requires careful planning and laying out of the work, accurate inspection and supervision, following up the work, and making sure that operations are running smoothly. Many emergencies constantly arise which must be taken care of; the experienced production man soon develops a sixth sense which enables him to "smell" trouble before it occurs.

A man must have courage, resourcefulness, ingenuity, and a capacity for detail. Many are so buried with detail that they never have time to succeed. The capable man masters details and organizes them in such a manner that they will function according to his desires. He does not allow them to ride him to failure nor cause him to fritter away valuable time in handling them.

Someone gifted with a desire for brevity has said that *an executive must know how to organize, to deputize, and to supervise*. Certain it is, that only the foreman who plans his work carefully, has his room laid out, his equipment in good condition, and his help properly trained, can run his department smoothly, handle emergency situations, rush out work, and adapt himself to the infinite and constant variations which are the very nature of the candy business.

The old type foreman who ran his department by "rule of thumb" methods could get along in the small shop, but under modern business conditions where competition makes such exacting demands on the manufacturer, such a man is hopelessly lost, as he cannot keep up with the progress of the industry. Quality and quantity must be maintained. Work must be got out on time, and costs must be kept down.

### Organized Supervision

Perhaps at this point a few suggestions will not be amiss as to the way in which the experienced man lays out his plans and supervises his work. He begins with an analysis of his problems and determines the exact work that is to be done; then develops the best methods for doing this work and fixes his standards of performance. He makes sure of his working conditions, the adequacy of his equipment and other working facilities. He develops plans for insuring sufficient supplies of material of the right quality. He studies carefully the points mentioned above, and has definite standards of formulas and manufacturing methods.

He subdivides the work to be done into individual operations and lays it out in such manner that it can be handled advantageously by his working force. He knows his workers, their capacities and abilities, and is, therefore, accurate in his selection of the right persons to do each task. He sees that each knows exactly



what he is to do, has the right instructions, and is imbued with the right spirit and attitude toward his work. He knows how to assign work properly, to place just the right degree of responsibility, and at the same time to maintain control and firm supervision without interfering with accomplishment.

He develops a definite method of giving orders and instructions so that there will be no misunderstanding. These are given clearly, distinctly, in such a manner as not to arouse ill-feeling. He makes sure that work will be properly inspected, that necessary checks are provided to catch any errors that are made. He adopts for himself some definite method of planning and laying out his work ahead so that each worker knows when, how, and what he is to do. He works out time schedules, and knows how long it will take to get out his work and how closely one batch can follow another. He keeps his work properly distributed, the different machines and work places properly balanced, so that there is no choking up or confusion at any one point and yet at the same time there is no undue idleness or waiting on the part of either machines or workers.

While all foremen do this planning more or less unconsciously, nevertheless those who are in charge of large rooms find it desirable to use charts and lay-out boards to assist them in keeping work properly moving. There is no reason

why any man today should depend entirely on his memory, as there are many well-tried methods of charting the work in each room and posting it where it can be seen constantly not only by the foreman but by his assistants and others who need this information. All in all the modern foreman in a candy factory is a man of parts. One who can maintain quality, put "pep" and enthusiasm into his working force and keep things humming all the time. Basing his work on accurate standards he "thinks things through," plans and looks ahead, surmounts obstacles, avoids confusion, handles emergencies easily and shoulders his full share of responsibility.

At the same time he keeps in step with the management, follows directions and instructions gladly and fits in smoothly with the rest of the organization. Cooperation is his middle name. He welcomes new ideas and suggestions and is continually searching for improvements. His records and reports are accurate and prompt. He soon becomes the mainstay of his superintendent and his manager.

Certainly no industry holds forth better opportunities to the man who can qualify. The demand for confections is increasing. Competition is keen enough to test every man's metal. There is plenty of room in which to grow and develop. Do you agree? All right! Then "let's go!"

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*We would like to receive comments on this article by superintendents and foremen. Let's have a discussion of the duties and problems of each department. For instance, we would like to have a chapter on Marshmallow Department, another on the Cream Department, the Hard Goods, the Enrober, etc.—and most particularly the dipping and packing departments.*

*May we have some comments from foreladies on the application of this article to their department?—Editor.*

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# III—Standards of Cacao Products and Forms of Adulteration

The third of a series of five articles on Cacao Products

by **Robert Schwarz and M. A. Posen**

of the Schwarz Laboratories

*The Schwarz Laboratories have for many years specialized on the chemical problems of the chocolate industry and have made a special study of the practical manufacturing problems of chocolate and cocoa plants.—EDITOR.*

*Exclusively for The Candy Manufacturer*

**A**S A GUIDE for federal, state and municipal food law enforcement officials and for manufacturers and dealers, definitions and standards for many food products have been promulgated. In some instances, the standards are included as sections of laws enacted by legislative bodies, but in most cases they are issued by officials or official bodies charged by law with the enforcement of laws regulating the manufacture, distribution and sale of foods.

As standards are adopted by federal, state and municipal bodies, it is quite conceivable that there may exist simultaneously a number of widely differing standards for the same food product. This is actually true in the case of milk, for example, as there is considerable lack of conformity in the various standards for this commodity in force in different sections of this country.

In recent years, however, there has come a realization of the advantages of a uniform standard for each commodity, with the result that many of the inequalities heretofore existing have been eliminated. A prime mover in this laudable cause has been the Office of State Co-operative Food and Drug Control of the Bureau of Chemistry, U. S. Department of Agriculture, which rendered yeoman service in bringing together federal, state and municipal officials.

In the case of cacao products, the definitions and standards promulgated by the Secretary of Agriculture of the United States, commonly referred to as the U. S. Government standards, are almost universally accepted. These standards have been arrived at after careful thought, much investigation, and public hearings, and are accepted as authoritative by the courts, by food law enforcement officials, and by the trade. Most states and municipalities have adopted the U. S. Government standards, so that a satisfactory degree of uniformity exists between the standards for cacao products sold in interstate and intrastate commerce.

The present U. S. standards were issued by the Secretary of Agriculture, February 15, 1916, as Food Inspection Decision 165, after they had been adopted by the Joint Committee on Definitions and Standards composed of

representatives of the Association of American Dairy, Food and Drug officials, the Association of Official Agricultural Chemists and the Department of Agriculture. These standards had also been approved by the two associations mentioned above.

The need for revision or amendments to these standards in the light of experience and developments in the art gradually arose, with the result that on January 12-13, 1922, a public hearing was held at the Bureau of Chemistry, U. S. Department of Agriculture, Washington, D. C., to discuss the tentative new standards for cacao products, previously released by the Committee on Definitions and Standards. At this hearing, ably presided over and conducted by Dr. W. W. Skinner of the Bureau of Chemistry, food law enforcement officials and most of the large manufacturers were represented. The Schwarz Laboratories represented several manufacturers and presented a brief embodying suggestions for amendments and revisions based on analytical and research work on many commercial samples. The hearing brought forth many interesting and important comments and suggestions, and was marked by courtesy and the spirit of co-operation on the part of all concerned.

As a result of this hearing, the Committee on Definitions and Standards, under date of October 9, 1922, released copies of the new definitions and standards as finally modified by the Committee, at its meeting held during the last week in September, 1922. These standards were approved by the Association of Official Agricultural Chemists at its meeting in Washington, November 15-17, 1922, and will become effective under the Federal Food and Drugs Act when approved by the Secretary of Agriculture. This action will undoubtedly follow, as a matter of course, within the next few months.

These definitions and standards, which will soon be in effect, are as follows:

## Definitions and Standards of Cocoa Products

1. CACAO BEANS, COCOA BEANS, are the seeds of trees belonging to the Genus *Theobroma*, especially those of *Theobroma cacao* L., and closely related species.
2. CACAO NIBS, COCOA NIBS,

## The Complete Serial on Cacao Products

Article 1, October, 1922—Introductory. Source, distribution and history of Cacao Products.

Article 2, November, 1922—Varieties, composition, commercial production of Cocoa and Chocolate.

Article 3, December, 1922—Standards of Cacao Products and forms of adulteration.

Article 4, January, 1923, The Superintendent's Number—Application, Uses and Handling of Chocolate and Cocoa.

Article 5, February, 1923—Laboratory control of Cacao Products.

"CRACKED COCOA," are roasted or dried cacao beans, broken and freed from germ and from shell or husk.

3. CHOCOLATE, PLAIN CHOCOLATE, BITTER CHOCOLATE, CHOCOLATE LIQUOR, CHOCOLATE PASTE, BITTER CHOCOLATE COATING,\* is the solid or plastic mass obtained by grinding cacao nibs and contains not less than fifty per cent (50%) of cacao fat and, on the moisture- and fat-free basis, not more than eight per cent (8%) of total ash, not more than four-tenths per cent (0.4%) of ash insoluble in hydrochloric acid and not more than seven per cent (7%) of crude fiber.

4. SWEET CHOCOLATE, SWEET CHOCOLATE COATING, is chocolate mixed with sugar (sucrose), with or without the addition of cacao butter, spices, or other flavoring materials, and contains, on the moisture-, sugar- and fat-free basis, no greater percentage of total ash, ash insoluble in hydrochloric acid, or crude fiber, respectively, than is found in moisture- and fat-free chocolate.

5. MILK CHOCOLATE, SWEET MILK CHOCOLATE, is the product obtained by grinding chocolate with sugar, with the solids of whole milk, or the constituents of milk solids in proportions normal for whole milk, and with or without cacao butter and/or flavoring material. It contains not less than twelve per cent (12%) of solids of whole milk or constituents of milk solids in proportions normal for whole milk.

6. COCOA, POWDERED COCOA, is chocolate deprived of a portion of its fat and pulverized, and contains, on the moisture- and fat-free basis, no greater percentage of total ash, ash insoluble in hydrochloric acid, or crude fiber, respectively, than is found in moisture- and fat-free chocolate.

7. "BREAKFAST COCOA" is cocoa which contains not less than twenty-two per cent (22%) of cacao fat.

8. SWEET COCOA, SWEETENED COCOA, is cocoa mixed with sugar (sucrose) and contains not more than sixty-five per cent (65%) of sugar in the finished product, and, on the moisture-, sugar- and fat-free basis, no greater percentage of total ash, ash insoluble in hydrochloric acid, or crude fiber, respectively, than is found in moisture- and fat-free chocolate.

9. SWEET MILK COCOA, is the product obtained by grinding cocoa with sugar, with the solids of whole milk, or the constituents of milk solids in proportions normal for whole milk, and with or without flavoring material. It contains not less than twelve per cent (12%) of milk solids.

### Edible Vegetable Oils and Fats

CACAO BUTTER, COCOA BUTTER, is the edible fat obtained from sound cacao beans (seeds of *Theobroma cacao* L., or other closely related species), either before or after roasting.

\*Definitions and standards for alkalinized products will form a separate schedule

When cocoa butter is sold for use in pharmaceutical or medicinal products, it must comply with the requirements of the United States Pharmacopœia, which are as follows:

### Oil of Theobroma

#### Cacao Butter.

A concrete fixed oil obtained from the roasted seeds of *Theobroma Cacao* Linné (Fam. Sterculiaceæ).

Oil of Theobroma is a yellowish-white solid, having a faint, agreeable odor, and a bland, chocolate-like taste.

It is slightly brittle at temperature below 25°C.

It is slightly soluble in alcohol, soluble in boiling dehydrated alcohol, and freely soluble in ether, chloroform, or benzene.

Specific gravity: About 0.973 at 25°C.

It melts between 30° and 35°C.

Dissolve 1 gm. of oil of Theobroma in 3 mls of ether in a test tube at a temperature of 17°C. and immerse the tube in water having the temperature of melting ice. The liquid does not become turbid nor deposit white flakes in less than three minutes; and if the mixture after congealing is again brought to 15°C., it gradually forms a perfectly clear liquid (wax, stearin or tallow).

Saponification value: not less than 188 nor more than 195 (See Part II, Test No. 9).

Iodine value: not less than 33 nor more than 38 (See Part II, Test No. 8).

### Comments on Above Standards

IN THE case of cocoa butter, it is to be noted that there is one legal standard for edible cocoa butter and another for medicinal cocoa butter. In reality, however, the discrepancy



is more apparent than real, for a pure edible cocoa butter of good quality will usually comply with the pharmacopœcial requirements.

Now let us see what these standards really mean and how they differ from the standards which they supersede.

(1) *Cacao Beans*: This definition is self-explanatory. The addition of the words "and closely related species", not contained in the old standards, is in recognition of the fact that good grades of commercial cocoa beans are furnished by a few species of trees not identical but closely related to, *Theobroma Cacao* L.

(2) *Cacao Nibs*: The new definition includes nibs prepared from dried beans and requires the removal of germ as well as shell. It has been recognized that the presence of the germ does not improve the quality of manufactured products and may increase the crude fiber content to a noticeable extent. The definition does not mean that the nibs must be absolutely free from shell and germ. Food law enforcement officials realize that at the present time, it is impossible to remove all germ and husk in commercial practice, and usually adopt a tolerance based on the inspection of manufacturing plants and on the examination of commercial samples.

It is important for the manufacturer, however, to have close control over the shell and germ content of the nibs as they come from the crackers and fanners, for it is a well known fact, or should be, that liquors, cocoa and coatings, made from nigs high in shell will not comply with the standard. By submitting samples of his nibs to the chemist trained in the examination of cacao products, the manufacturer can quickly learn at nominal cost, the exact shell and germ contents of his nibs, and can adjust his crackers and fanners, if necessary, so that his products will meet the requirements of this definition.

(3) *Chocolate Liquor: Plain Chocolate: Bitter Chocolate*: The new standard differs from the old in requiring a minimum fat content of 50% instead of 45%; in omitting specifications for water-insoluble ash and cacao starch; in adding requirements for total ash and acid-insoluble has; and in requiring not more than 7% crude fiber on the moisture and fat-free basis, instead of 3.50% on the "45%" basis.

This standard is a fair one. Few commercial liquors will run as low as 50% fat, while the average figure is between 53% and 54%. The ash requirements are reasonable.

There is some room for discussion with regard to the tolerance for crude fiber. Some pure liquors (this applies equally to cocoas or other products made from these liquors) will show in the moisture and fat-free cocoa matter, more than 7% crude fiber, even though the microscopic examination shows shell matter to be present in small proportion only. As a high

crude fiber content is one of the constants used by the food chemist in deciding whether a cacao product is adulterated by the addition of excessive quantity of shell, there is the danger that an inexperienced analyst might condemn a pure liquor or cocoa as adulterated with shell, without making a microscopic examination which would show that such a charge is unwarranted. Most commercial cacao products, however, will meet the standard requirements for crude fiber.

It will be noted that the standard includes no statement of a maximum tolerance for shell matter. Many manufacturers felt that such a statement would prove valuable in practice. The original draft of the tentative new standards released by the Joint Committee on Definitions and Standards, contained a maximum tolerance for shell matter. This was omitted from the final draft, however, for various reasons.

In the first place, the Committee felt that the cocoa and chocolate industry is constantly progressing, that new manufacturing processes and machinery are constantly being developed and that it may be only a relatively short time before a device for producing practically shell-free liquors will appear. In the light of these facts, the Committee believed that any published standard tolerance for shell would soon be obsolete, and preferred to depend on unofficial or semi-official tolerances, based on the average shell content found in liquors produced by good commercial practice, as determined by inspection of plants and the analysis of commercial samples, special stress being laid on the microscopic method for determining shell, which government and other chemists have found to be of great value.

In this way, the Committee felt that a flexible and fairer tolerance for shell which would keep pace with the progress in the art, would result. Another objection, of course, to a standard maximum tolerance for shell matter, is that some unscrupulous manufacturers would so manipulate their products that the shell content would be just within the maximum tolerance.

(4) *Sweet Chocolate, Sweet Chocolate Coating*: This standard has been changed so that it conforms with the new standard for chocolate liquors, from which coatings are made.

(5) *Milk chocolate, sweet milk chocolate*: This likewise has been modified to conform with the new standard for chocolate liquor. The addition of the words "or constituents of milk solids in proportions normal for whole milk" is of decided interest to the manufacturer. This means that the 12% or more of whole milk solids required by the standard may be introduced into the chocolate, not only by the addition of whole milk, condensed whole milk or whole milk powder as such, but also in the form of skim milk, condensed skim milk, or skim milk powder, plus the proper amount of pure butter fat. It is important, however, that the fat and the skim

(Continued on page 74)



# Why the Candy Superintendent Needs Scientific Knowledge

by **Fredr. P. Siebel, Ph. G.,**

*President, Siebel Institute of Technology*

**I**T IS difficult, if indeed possible, to say much that is new on education, which because of its immediate and intimate relation to the advancement of civilization has been given more thought than perhaps any other subject. This is rightfully so for without knowledge, progress, of which knowledge is the very foundation, would be impossible.

Defining education as applied to candy-making, we may say that it is the knowledge of applying science systematically to the economic production of appetizing and demand-creating sweet goods. In former years this knowledge was at least partly gained by hard knocks through many years of wearisome toil in the "school of experience," which at the best has in most instances proved itself to be neither definite nor thorough.

The adage "Knowledge is Power" cannot be repeated too often, since the achievement of success in the industrial world is invariably in direct proportion to the mental attainment and ability of the individual. While it cannot be gainsaid that practical experience is an essential prerequisite of a thorough understanding of candy-making, observation has proved with equal certainty that a thorough knowledge of the fundamental scientific principles involved will insure not only a more rapid, but particularly a more thorough, grasp of the practical training. Knowing the whys and wherefores at each successive stage in practical manipulations makes it easier to acquire skill.

The economic conditions under which the candy-maker operates today demand organization, the scientific use of raw materials, routing, inspection, scheduling and other production factors, the execution of which to the necessary degree of perfection is possible only under the guidance of one who possesses not alone the practical experience but also a technical training.

## **Practical Experience Alone No Longer Sufficient**

Recognition of the need of technical guidance by those owners and organizations who are sincerely desirous of

success will awaken them, as is true regarding the leaders in other industries, to the fact that practical experience alone is no longer sufficient to serve the need of the candy industry. This period is no longer coming—it is here now, and only such men who have kept pace with the trend of the times, and who are prepared when called upon to meet this condition, are going to win out and be successful.

Unfortunately too many are inclined to minimize the effects of or entirely disregard this industrial evolution until they find themselves suddenly replaced by a more progressive brother. Or else they feel that they are underpaid, losing sight of the fact that every untrained employee pays for the supervision which he requires on the part of his superiors, whose knowledge of the essential technical points of the industry he lacks. So it is that we are here again squarely confronted by the question of the "survival of the fittest."

## **Systematic Training Necessary**

The greater knowledge and efficiency demanded by the industry today can no longer be gained in the school of experience, or through scattered haphazard reading or misguided and necessarily restricted personal supervision, since as a matter of fact a superficial knowledge (such as unfortunately numerous workers are satisfied with) always proves harmful in the end.

While this line of intelligent reasoning leads to the logical conclusion that the successful superintendent must possess practical experience plus technical training, there are still other vital factors contributing thereto, such as character and personality. Character is largely the result of earlier environment and associations, while personality is acquired and developed by education, and not infrequently forms a predominant factor in the improvement of the character.

Specialization is no longer confined to the trades. It includes every phase of activity in the arts and industries, and it was to meet this condition that institutions of learning were created which are properly designated as technical colleges or highly specialized

industrial schools. These schools differ from the academies in so far that at the university practically as much time is devoted in the course to general culture as to the special subjects of the respective course. The whole aim and purpose of the technical college, however, is to keep the student moving constantly in a definite direction, being satisfied with the culture which is a natural sequence of better education.

In order to secure the best possible returns from a school of this kind, not only one but several factors must be considered, and each one of these has its relative important bearing, hence their practical execution and adaptation is a matter requiring careful study and observation extending over years of experience.

## **Important Features Connected With Specialized Training**

Among the outstanding features in this regard, we may briefly summarize the following:

A limited attendance.

Individual attention.

Concentration on all essentials and elimination of non-essentials.

An intensive constructive curriculum so arranged that the subjects co-ordinate one with another, forming a complete entirety. Last but not least a staff of instructors who, while they are university graduates, have also enjoyed extensive practical experience in their respective branches.

All of these features when combined not only make it possible to cover a vast amount of material in a comparatively short period, but they also make it easy for the student to absorb his studies because of the greater individual attention and the special qualifications of the instructors. This method of training also makes the work during the course equally interesting to all of the students, regardless of their respective educational attainments at the time of entering the class, provided, of course, that they possess the necessary ambition and application to balance any possible lack of a more advanced education.

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Charles H. Ellston has been appointed director and secretary of Lara Secord Confectioners, Limited.

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The Selected Qualities Candy Corporation is a new candy factory in Wichita, Kan. The factory is specializing in making bars.

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The plant of the Atlas Candy Company, Lynchburg, Va., burned December 22nd. The loss is estimated at \$50,000.

## Standards and Adulterations of Cacao Products

(Continued from page 72)

# PETER'S for 1923

We have been given most substantial proof during 1922 that it pays to make good goods. Our chocolate coating business has increased enormously. It has grown by the very simple process of one manufacturer after another getting acquainted with the genuine superiority of the PETER Chocolate.

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milk be introduced in the proportions normal for whole milk solids. If this is not done, partially skimmed milk solids or an abnormal and illegal mixture will result.

The advantage to the manufacturer of the optional method for introducing milk solids is apparent when we consider that both pure butter fat and skim milk powder have very good keeping qualities, and may be purchased in time of abundant production, stored until needed, and combined to form whole milk solids when necessary.

(6) *Cocoa, Powdered Cocoa*: This standard has been modified to conform with the new standard for chocolate liquor.

(7) *Breakfast cocoa*: This is an entirely new standard and marks the first mention in an official standard of a definite requirement for the fat content of a cocoa. For years, the trade has grown accustomed to a semi-official minimum tolerance of 22% fat, required by the Army and Navy, by other government departments, and by some public and semi-public institutions. The original intention of the Committee was to make a uniform minimum tolerance of 20% fat for all cocoas. Manufacturers objected to this on the ground that lean cocoas were valuable products from a dietetic standpoint and were in great demand by biscuit and cracker manufacturers who did not desire a high fat content. Under a 20% minimum tolerance such products could not be sold as cocoa in interstate commerce. In view of the above, and also because some manufacturer argued for a higher minimum tolerance for a specially designated cocoa, the present standard for breakfast cocoa, including the minimum tolerance of 22% fat, was finally adopted.

(8) *Sweet Cocoa*: The maximum tolerance for sugar has been increased from 60% to 65% and the standard has been altered to agree with the new standard for chocolate liquor.

(9) *Sweet Milk Cocoa*: As in the case of milk chocolate, the new standard permits the introduction of whole milk solids in the form of skim milk solids and butter fat in proper proportions. This standard has also been changed to agree with the new standard for chocolate liquor.

(D) *Cocoa Butter*: The new standard is general in scope and means that the fat must be edible cocoa butter, free from adulterants.

### Viewpoint of Food Law Enforcement Officials

THE reader will naturally inquire at this point, just how, and to what extent, the standards are used in the enforcements of the Food and Drugs Act. It may be stated at the outset that Food law enforcement officials as a class, are not given to drastic action on technical violations of the law. They are interested pri-

marily in enforcing the general provisions of the act which are essentially as follows in connection with a product which is adulterated: In the case of confectionery: If it contain certain mineral fillers, poisonous color or flavor, or other ingredient harmful to health, or vinous, malt, or spirituous liquor or narcotic drug. In case of food:

1. If any substance has been mixed or packed with it so as to reduce or lower or injuriously affect its quality of strength.

2. If any substance has been substituted wholly or in part for the article.

3. If any valuable constituent has been wholly or in part abstracted.

4. If it be mixed, colored, powdered or stained in a manner whereby inferiority is concealed.

5. If it contain any added poisonous or other added deleterious ingredient which may render the article injurious to health.

6. If it consist in whole or in part of a filthy, decomposed or putrid animal or vegetable substance.

The Act also defines in considerable detail, the term misbranding, which refers principally to improper, false and misleading labeling of the product as to designation, composition, properties, net weight or contents, or country of manufacture.

It will be noted from the above, that the general provisions of the Act are sufficiently specific to cover all types of adulteration and misbranding of any consequence. It is with the enforcement of these general sections that the food law official is chiefly concerned.

The standards have been adopted as a guide to officials and manufacturer alike, mainly as a declaration of what constitutes good commercial practice and as an aid in suppressing unfair competition. Every honest and progressive manufacturer will find the standards beneficial to his business and by assisting in their enforcement, he will help in eliminating that bugbear of all honest business—the dishonest and unscrupulous competitor.

*Have you any questions or comments?—Editor.*

### **It Was Too Much**

Brown had just missed the 8:30 train after a desperate race along the platform. He was middle aged and his run had exhausted him.

As he walked back, much annoyed and puffing hard, a sympathetic porter said, "Missed the 8:30, sir?"

"O, no, thank you!" Brown answered. "I just hated the looks of it, so I chased it out of the station."

### **Quite All Right**

Wife (away from home)—Horrors I forgot to turn off the electric iron.

Husband—It's allright. Nothing will burn long. I forgot to turn off the water in the bathtub.



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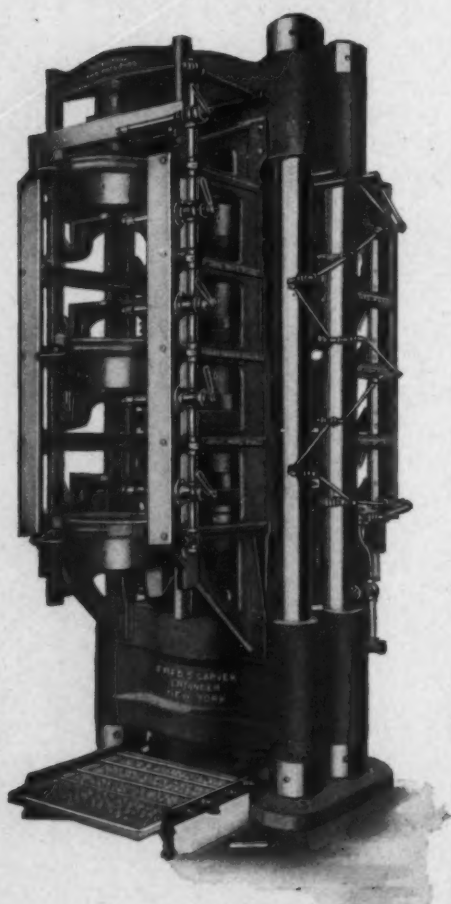
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Imperial	-	-	-	Dark Vanilla
Blackhawk	-	-	-	Med. Dark Vanilla
Kenwood	-	-	-	Dark Sweet
Lawndale	-	-	-	Dark Sweet
Cameo	-	-	-	Light Sweet
Melrose	-	-	-	Bittersweet
Morocco	-	-	-	Bittersweet
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# Confectioners' Colors

## Their Uses and Abuses

by *Stroud Jordan, Ph.D.*

*Industrial Chemist*

*Exclusively for The Candy Manufacturer*

**C**OLORING is an art dating from early times and just when it was first practiced is mere guess work. It is a recognized fact, however, that certain colors have an appealing effect directly on the eye and indirectly upon the appetite. As a test one need only have two pieces of the same butter set before him, one pale and without appreciable color and the other having the characteristic butter color which has been added.

This will go with many things we eat and drink and the art of coloring properly has been worked at so long and so diligently that we have at our disposal quite a variety of synthetic colors, eight of which are permissible in food products and from these a large number of mixtures may be made. We also have vegetable or natural colors which are many and varying but it so happens that the certified or synthetic colors are more uniform and hold up better. In the majority of States the use of certified colors is permissible by so stating on the package but a very small minority hold on like grim death and refuse to allow an article of food for sale which contains these colors.

Many years ago you would have had to extract your own color from raw materials and if you had wished a blue you would have grown and extracted indigo; if you had wished red you would have used madder and if yellow you would have probably extracted tumeric (*curcuma*) and so on down the line of the colors but today you make out a requisition slip and send it to your purchasing agent who orders these materials from a reputable supplier.

The three most familiar forms in which you get your colors are, liquid, paste and powder, each of which has a specific use in your manufacture. Methods of keeping tabs on these colors have already been outlined in a previous article but what are you doing to control the use and care of these colors after they have reached your plant. It might be well to make a tour of inspection and see how each foreman and operative keeps these colors and find out if they are used in a manner which will bring satisfactory results.

Natural colors are supplied in the forms just mentioned and they should be diluted to the proper strength before using, having clear solu-

tions wherever the strength will permit the use of it. In case your color is too weak if it is in perfect solution, it becomes necessary to make a suspension which will pass through a hundred mesh sieve and to have specific directions that such color must be shaken before each use.

If you have lumps of undissolved color or specks of trash your product will have a mottled appearance or very dull looking surface and this is to be avoided. All natural colors with the possible exception of carmine are never entirely uniform and each batch in which they are used is an individual one and hard to duplicate as to exact shade. The solubilities of these colors are also variable, therefore no hard and fast rule may be laid down but wherever it is possible one should try and dissolve the special color and make a record of how much may be used to the finished gallon of color so that this fact will be available for future reference. This will often save needless waste and worry.

With the certified colors the solubility is an entirely different story and the eight permissible colors from which the several mixtures and shades are compounded have very definite solubilities, provided that the water is uniform. In the use of ponceau, orange and naphthol yellow one will find that he may dissolve from five to six ounces with ease to every finished gallon, but not more with any degree of safety. In the case of the orange which settles out if chilled quickly one may add about one tenth of one per cent of bicarbonate of soda which will aid materially in keeping the solution.

Erythrosine, tartrazine and amaranth will dissolve in the proportion of twenty to twenty-five ounces to the gallon of finished color but here again the water and actual temperature play an important part in the actual keeping of such solutions. Light green S. F. yellowish will dissolve from fifteen to twenty ounces to the finished gallon with the same rules as to water and temperature applying. Indigo di-sulpho acid, sometimes sold as the soda salt and also called by several trade names, will dissolve from one to one and a quarter ounces to the finished gallon and its actual coloring strength is much greater than any of the colors mentioned.

Solubility factors enter into the clearness of the product colored to such an extent that a



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—Crystal A

For rock candy  
—Coarse Granulated

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casual glance will pick out the piece which has been colored with pure solutions as against that colored with a poor mixture. Can you imagine the use of an indigo solution which has had three ounces of indigo dissolved to the gallon by boiling and then on cooling had the excess to settle out? At the finish of the gallon a careless operative may dump the dregs into a graduate and use this in a batch and perhaps there is enough indigo in an ounce of these dregs to make a quart of proper strength solution.

On account of the varying solubility factors for the eight colors mentioned, their mixtures will dissolve differently and solutions which have been super-saturated will be entirely different from the color used to start. Suppose that you made an orange color by mixing tartrazine and ponceau and added twice the proper amount to dissolve in a gallon but on heating it would go up.

After this solution cools and settles you will find that ponceau and tartrazine have settled out but ponceau is the least soluble of the two, therefore the actual amount of ponceau which has settled out is not proportional to the amount used but very much greater and the orange color left in solution will begin to shade more yellow. If such a solution of color is used and the goods compared with other goods made with a proper solution of the same color the difference in shades will be very apparent.

This case is cited only as an example and if we go into the mixtures of colors which give varying shades we will find that solubility is a factor which must be watched carefully at all times. With this same idea in view let's see what happens to a mixed powder containing three colors. If we are going to use this powder for a batch we will probably dissolve the right amount in a small quantity of the syrup from the batch and use the right proportion of this for the color but suppose that we have not taken the proper precautions to see that the powder is uniform, will it give the same shade as a former lot?

To obtain uniform colors it is necessary to watch the several pastes and powders furnished for special shades and chart each for future reference. You can actually see two or more shades in the powder mixtures and if care is not taken to ensure an even mixture or to use the whole of the parcel at once, there will most surely be trouble.

With the assurance of a uniform product, whether it be liquid, paste or powder, this in no wise eliminates error in measurement of colors used and this is too often overlooked. You cannot make the same shade twice with two parcels of the same batch and color unless the same amounts are used. It is a further fact that the average guess measurement from a jar of paste is probably correct to within fifty per cent either way and this is not conducive to accurate shade matching. Perhaps you may have seen an operative take a stick and gouge out a guess



amount and slop it into a batch of goods but you can bet that this same operative won't make two batches the same shade and will probably cuss the color for getting a batch which is darker this time than the time before.

The use of a graduate doesn't eliminate color differences unless the color is measured accurately in it. The lines on a graduate are made to denote a point at which one should stop pouring and not where one gives an extra push before taking away the bottle. The same may be said about weighing powdered colors for the smaller the amount weighed at one time, the greater the error and it is desirable to weigh as large an amount as is practical and to actually weigh and not slap in another handful to make good weight.

The next step in coloring is to see that a proper distribution is had and that the color is worked in uniformly. It so happens that colors are best added at the latter part of operations for the character of the color itself or that of the solution may be acid or alkaline and whichever is different will affect the other. It may be that the batch is acid or alkaline and if this is so the shade of the color may be completely altered. It is well to remember that colors in general, work best in neutral solutions and that you cannot expect to get results in a batch carrying 1 lb of tartaric acid to the hundred pounds which will be comparable with those in a batch which is neutral or carries alkali such as carbonate of soda, unless the color is resistant to both acid and alkali.

To actually find out what your colors will do make up a solution of sugar in water and split it three ways. To one lot add 1.00% of tartaric acid, to the other 0.25% of sodium bicarbonate and leave the other as it is but add the same amount of color to each. Boil these solutions the same length of time and note any change, also set them away and note the effect of aging.

Still another feature must be watched carefully and that is the presence of foreign colors in the syrups used. It is obvious that if we use a perfectly white sugar syrup and one with a deep yellow cast that the white one will give a good blue with indigo while the off-colored syrup will give a greenish blue, depending on the actual amount of yellow present.

Further we cannot use scrap sugar or syrup in which there are present several different colors and hope to cover these with one strong color and have the result to compare with the same color used in the goods made from white sugar and water. Colored syrups may be used where mixed goods are made and pieces do not have to be the same color or where it is unnecessary to duplicate the order. If it is remembered that any foreign color will blend with the color used and give different results from the use of pure colors and pure products, much waste will be eliminated and more uniform products will be made.

## THE FOUNDATION MUST BE RIGHT



THE EFFORTS of a lifetime spent in perfecting a product may be lost in a few weeks by an indiscreet "saving" on raw material.

¶ One bad batch, widely distributed, may mean a setback of years, and even a slight lack of uniformity will militate against the success of any product.

¶ The raw materials are the foundation stones, and they must be right—otherwise uniformity is impossible.

¶ VANILLIN is the very corner-stone of your Extract or Confection. You, therefore, cannot afford to be indifferent about the quality of this important flavor.

¶ VANILLIN-Monsanto is right—always right—for the purity standard (higher than that required by the United States Pharmacopoeia) adopted by us years ago, is rigidly maintained.

¶ Build with pure white VANILLIN-Monsanto and your product will stand on a firm foundation.



**Monsanto Chemical Works**  
ST. LOUIS, USA

*Manufacturers of*

VANILLIN-Monsanto (the pure white Vanillin)  
and  
COUMARIN-Monsanto (the original American Coumarin)

Stocks are carried in St. Louis, New York, Chicago,  
Minneapolis and San Francisco

Greatest Novelty for high-class packing of

**Easter Eggs and Rabbits**

# SILK WOOL

**60c a pound**

In White, Easter Green, Pink, Purple,  
Yellow and Blue.

Wonderfully glossy and rich looking.

Not to be compared with anything on the  
market all these years. One pound covers  
large space.

Try a pound of each color today.



**Fancy Tinfoil in Beautiful Designs**

**Colored Aluminum Foil in  
Striking Colors**

**Gold Tinsel Cord, One and Two-ply**

**Gold Tinsel Ribbons in Two Widths**

**Foil Bonbon Cups**

**Fenestra, the Unrivalled French  
Wrapper**

**Chocolate Dipping Paper**

**Wafers for "Lebkuchen" and Nougats**

**Wattolyn**

**Honey Comb Division Paper**

**Cotton Paper**

**Beautiful Printed Glassines**

**Fancy Tissue Papers**

**Velour Paper for Sample Cards**

**Gold Paper Borders**

**Metal Easter Baskets**



## KARL PAULI CORPORATION

**454 Broome Street**

**New York City**

Last, but not least, is the proper care of the colors. It is not policy to leave a can of powdered color open and allow dust to settle in it and then hope to get brilliant colors nor is it practical to allow light to act on the color all the time for color is subject to many changes on storage. The same rule applies to pastes and liquids, for wherever there is evaporation and a consequent separating out of color we have different concentrations and will get different results.

Keep your packages, whether cans, bottles or jars, closed because that is what they were made for and the manufacturer wouldn't go to the expense of buying containers if he could wrap the colors in paper and get away with it. The whole matter sums itself up into the fact that if you want good colors, buy them, use them and keep them right and you will get good results but if you fall down on either of these precautions you will most surely have trouble.

### "Forbes Epigrams"

Make good or make room.

• • •

It may be all right to be content with what you have; never with what you are.

• • •

The most profitless thing to manufacture is excuses.

• • •

The longer you gaze on an obstacle the bigger it becomes.

• • •

Even a tack is no good unless a little driving power is applied to it.

• • •

You aspire to become a boss? Then need no bossing.

• • •

In the end the things that count are the things you can't count.

• • •

A shady business never yields a sunny life.

• • •

Diamonds are chunks of coal that stuck to their job.

• • •

The staunchest trees must needs have the staunchest roots, please remember.

• • •

The young man who aspires to do things must early learn to do without things.

• • •

The place for the "Knocker" is outside the door.

• • •

Don't simply see how you can "put in the day." See how much you can put into the day.

• • •

Honking your horn doesn't help so much as steering wisely.

• • •

After all, you've got to give full, fair value, or you won't last.

• • •

To fill your job fill your mind.

## Chinese Great Candy Eaters

Cheap hard candies, chocolate bars, and butter scotch are very much sought after by the Chinese, who are large consumers of candies and sweetmeats and limitless possibilities would greet American candy exporters but for the low buying power of the people, Consul General Fuller, Tientsin, informs the Department of Commerce. Small, hard candies made up into balls, drops, and squares find the greatest distribution the highly colored varieties appealing to the children. Marshmallows in air-tight tins sell well, and there are many brands of English and American bar chocolate to be had in all the large Chinese cities. In Tientsin, a German firm making candy baked goods, ice cream, cakes, etc., is very popular and they make a specialty of chocolate candy which is of a good quality. One of the partners of this firm served an apprenticeship in the United States.

A country simpleton—not so simple as he looked—was sent out to hunt for a lost cow that had been unavailingly searched for by the entire community. To the amazement of all, a few minutes after he started out he returned, driving the cow. The astonished bystanders immediately wanted to know how he had found the “critter.”

“Well, I jest set down and thought of the place I would go if I was a cow,” he explained. “And then I went there—and there she was!”

The way to find business to-day is to figure out where the business is likely to be—and GO GET IT!

### A “Peptimist”

An optimist is a man who believes that the seed he plants in the garden will grow and look as good as the pictures on the package.

A pessimist stands beneath the tree of prosperity and growls when the fruit falls on his head.

A “peptimist” is the happy medium between these two.

He doesn't believe with the optimist, equal to the picture on the package—that the seeds will produce something, but he does believe they will grow and bring some return for his labor.

Should the fruit from the tree of prosperity fall on his head, he rubs the bump and grabs the fruit.

When the weather reports say “fair and warmer” he believes it—and carries his umbrella.

Like the optimist, he sees the bright side of things and goes ahead, but he also sees the dark side and prepares to meet it.

And here lies his success—looking not alone on the dark side, but seeing both sides clearly.—Ex.

“Life ain't in holdin' a good hand, but in playin' a poor hand well.”

### What We Need

I am not given much to poetry. Much of it is beyond me; it goes over my head. After I read a great many poems I find myself asking this question, “What the devil does it mean?” Occasionally, however, I run into something that strikes a sympathetic chord in my nature and sets that old chord a-vibrating. And then I always feel like passing that poem along. In Forbes' Magazine, the other day, I read such a verse. And here it is:

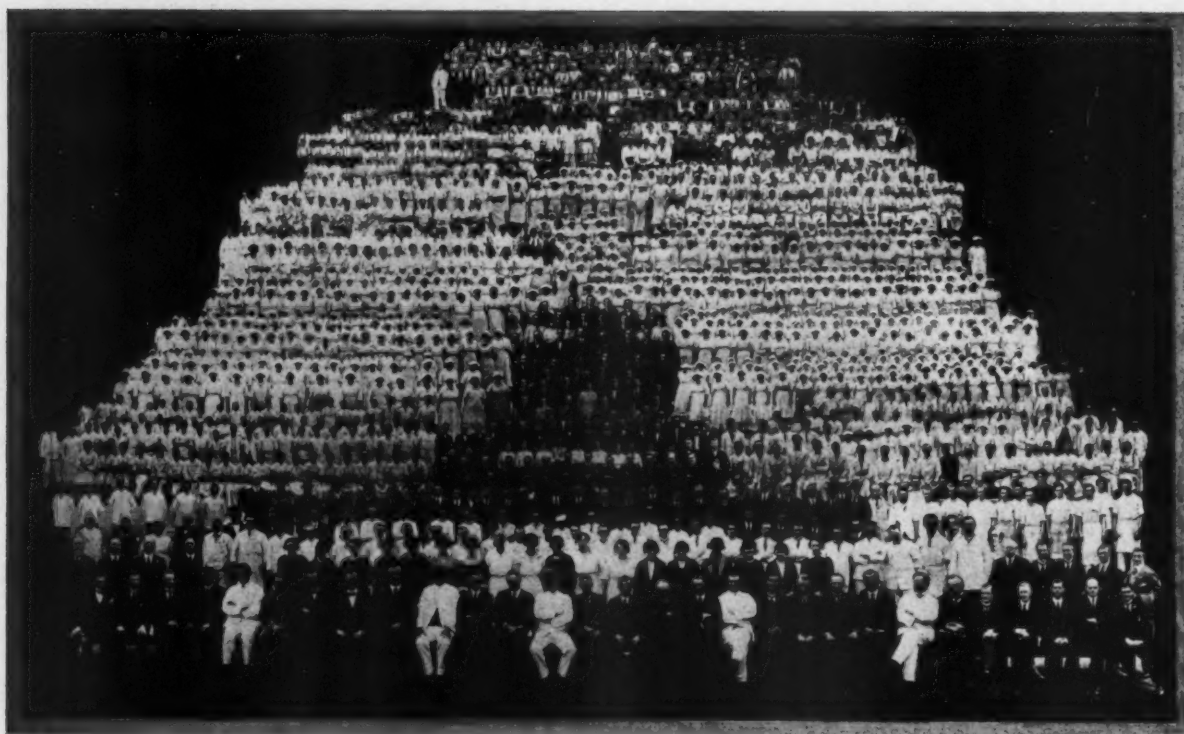
It might be all right to “get even,” but it is much better to get ahead.

*HAMPDEN*  
*Exclusive*  
*Designs*

**FANCY BOX  
PAPERS**

This is the  
**WALGRAIN**  
Box Paper Design. A Hampden Specialty.  
Send for sample sheets and prices.  
**Hampden Glazed Paper and  
Card Co.**  
HOLYOKE, MASS.





*MacRobertson*

Staff of Employees, 2,000 in Number;  
Wages Over £350,000 Annually.

## From Newsboy to Millionaire—A Romance of Industry

A story of one of the largest and most successful candy manufacturers in the world

*MacRobertson*

OF MELBOURNE, AUSTRALIA

**O**NE day in 1880 a young Australian of Scotch extraction, nineteen years of age, Macpherson Robertson by name, surveyed the world from his parents' cottage at Fitzroy, and asked himself which was the high road to Success.

At first glance the outlook was not promising. His parents were poor; his own savings amounted to no more than a few shillings, and he had had only as much education as could conveniently be squeezed into the plan on which his early life was ordered. The programme divided the day in some such fashion as this:

5 a. m.-7:30 a. m.—Delivering newspapers.

7:30 a. m.-8:30 a. m.—Lathering faces for a barber.

9 a. m.-4 p. m.—School.

6 p. m.-10 p. m.—Lathering more faces.

The rest of the day was his own.

### Self Help

Even this scanty schooling ceased when young Robertson was 10, and from that time on he abandoned the frivolities enumerated above and set about earning his living in good earnest. He went into a butcher's shop, decided that meat in bulk had no attraction for him, entered the works of a manufacturing confectioner, and then, having picked up a working knowledge of the trade, decided, on that momentous day in 1880, that his

mission in life was to make sweets.

Now it is one thing to arrive at these decisions; it is quite another thing to deliver the goods. The problem that confronted young Robertson at the outset was this: how is it possible to supply the world with sweets when one has neither premises, plant nor raw material, nor the capital with which to acquire them?

Superficially, as has been said, the prospect did not look encouraging. But any really intelligent boy would remember the counsel of Samuel Smiles and reflect that here were the conditions needed to ensure success—youth, poverty, enterprise, foresight, shrewdness, an industrious and strictly sober disposition, and all the other qualities which would have en-

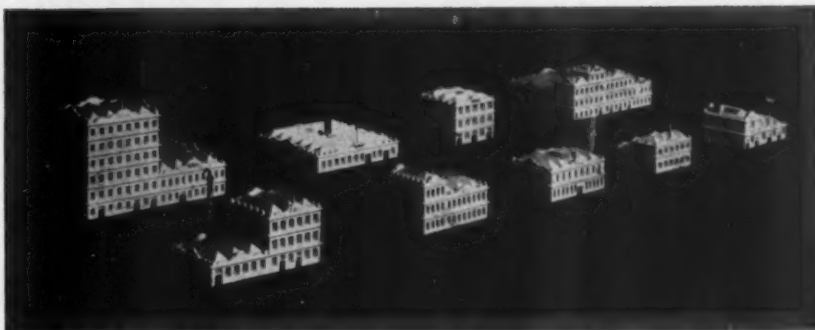
deared him to the author of "Self Help"

### Bathroom as Factory

Certainly no captain of industry written up by Dr. Smiles, no self-made hero of fiction, began more humbly or rose more surely than Mr. Macpherson Robertson. An old nail keg kept to serve as a furnace, a threepenny pannikin in which to boil the syrup, and his mother's bathroom for a factory—these were the assets with which he laid the foundations of the greatest confectionery business in Australia.

Needless to say, it has been a hard struggle. At first the only output of the factory was a few pounds of sugar mice and rabbits, manufactured on Mondays, Tuesdays, Wednesdays and Thursdays, and hawked around on Fridays and Saturdays. But gradually he established a regular connection and in a few months he had saved a small sum which enabled him to purchase more efficient plant. By 1885 he was occupying a small but more orthodox sort of factory, was employing a number of hands, and was able to effect delivery by cart. And by 1893 he had built up, by sheer unrelenting industry such a substantial business that he was able to undertake a tour of Europe and America with a view to picking up ideas and processes.

Since then he has never looked back. Before the war the business was steadily growing. Since 1914, thanks to Mr. Robertson's enterprise in spending £25,000 in manufacturing machinery that was unprocureable elsewhere, its expansion has been phenomenal. Some idea of what the industry means today may be gathered from the facts that "MacRobertson's" is capitalized at £1,500,000—



The House of MacRobertson, Australia. An exact replica of the works where Old Gold Chocolate Productions are made



*MacRobertson* 1922

Mr. Robertson is still sole owner—employs 2,000 hands and pays over £300,000 a year in wages. Nor is this all. Macpherson Robertson is not only one of the world's greatest con-

fectioners, he makes practically all his own machinery, does all his own printing, is making a strong bid for supremacy in Australia's cocoa market, and is sole owner or part proprietor of subsidiary concerns that turn out condensed milk, boxes, corn syrup and other commodities used in the manufacture and distribution of confectionery.

### A Young Man of 61

The best way to appreciate the gigantic scale on which the business is carried on is to do what I have just done—make a tour of the Fitzroy factory, with Mr. Robertson as guide.

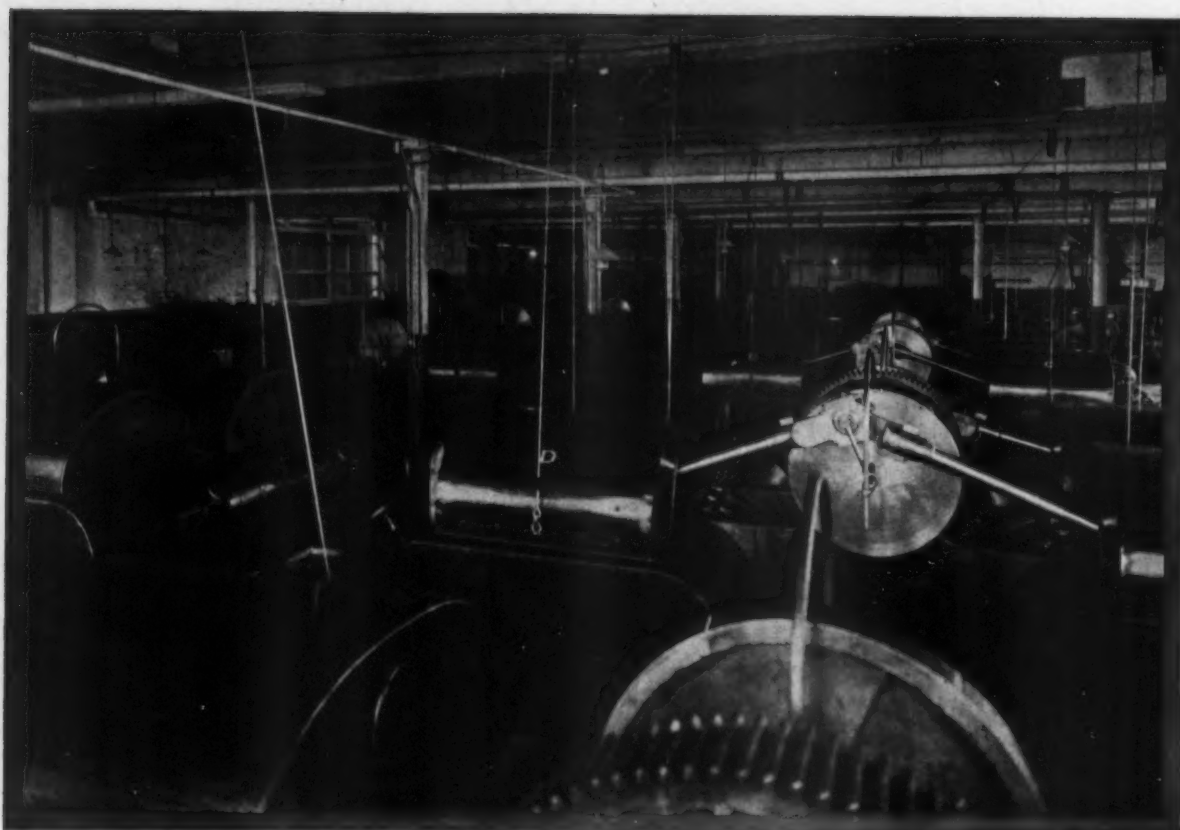
But it is only fair to warn you that you need to be fairly athletic. Sixty-one years of age, and white of hair, Mr. Robertson is one of the most surprisingly energetic young men I have encountered. He stands as erect as a drill sergeant, walks (when he is not running) with a springy step, and every morning jumps a 4 ft. 6 in. bar and has a round with a punch-ball for exercise. And in the factory he shows the same distressing vigor, leading the way at an even five miles an hour and going upstairs two or three at a time.

But the experience is worth it, for at MacRobertson's you see one of the most comprehensive and complete candy-making establishments in the world. There you may see every stage in the manufacture of some 600 different confections, from the melting and mixing of the first savory-smelling ingredients to the wrapping and packing of each little piece in the box in which it goes forth to the world.

Floors covered with machines and tables; huge steel boilers full of brown and yellow and black and white liquids; long, revolving chains of moulds that turn out hundreds of thousands of chocolate cakes a day in an endless stream; men who mix and knead at hot, doughlike substances, and feed them into machines that chop them into little sweets; hundreds of white-clad girls—everyone, from the proprietor down, wears white—looking up with smiling faces



Council Meeting of Executives, MacRobertson, Australia



Interior of one of MacRobertson's Milk Chocolate Departments at Melbourne, Australia

As an indication of the self-contained nature of this business and the resourcefulness of this institution it is interesting to note that all the machinery in the above illustration was constructed in the firm's own engineering shops.

while their fingers continue to move with a deftness and celerity that seem marvelous. Such are the impressions that the visitor carries away.

And most remarkable of all, perhaps, is the enthusiasm, detailed knowledge, and love of the business shown by that young man of 61. He knows every process, can take his turn with any of his men. And he not only keeps in touch with his business; he believes in keeping in touch with his staff as well. Mr. Robertson says he believes in running the establishment on thoroughly democratic lines, and to this policy he attributes the fact that he has never yet had a strike. All his older hands he knows by their nicknames. "This man and I used to work at the same bench in the old days," he said, indicating one old fellow. "Many a kick and cuff you gave me, too, didn't you?" he added. And the veteran smiled and nodded.

#### No Holiday for 30 Years

A millionaire today, Mr. Robertson has gone a long way since he started manufacturing in that cottage bath-

room which is still preserved in one corner of his works. But even now he never slackens. He feels happiest, he told me, when he is at work; and has not had a holiday—not even a week-end in the country—since 1893. For sheer unflagging industry and grim devotion to a single cause that is a record which is probably unique in all the annals of commerce.—G. C. D. in *The Herald*, Melbourne, Australia.

#### A Big Undertaking

Quoting from a statement given "Smith's Weekly," of Sydney, Australia, by Mr. MacRobertson: "Mr. MacPherson Robertson sent Mr. David Robertson abroad in 1912, and he succeeded in obtaining the right man for the manufacture of glucose, whom he brought back to Australia. They then succeeded in getting other confectioners to take a small interest in it. This meant building cask to hold the glucose. They then brought a man from America, and imported a complete

cask-manufacturing plant, and now they have the largest cask-manufacturing factory in the Commonwealth. MacRobertson's manufacture practically all the glucose used in Australia and New Zealand. The duty on glucose imported is £12 a ton.

"MacRobertson's have a body of returned soldiers on 4000 acres of land in Queensland, situated round about Kingdory, where they grow the maize for the glucose. They also have timber mills at Warburton to supply material for the casks. In consequence of the Bacchus Marsh people doubling the price of condensed milk, Mr. MacRobertson joined in with other confectioners and started manufacturing condensed milk for use in the trade. This ultimately resulted in one-pound tins being put on the market for the general public under the name of "Lifeguard" condensed milk. The bi-products of glucose are mainly "Dandy" Starch, salad oil, and cream korn flour."





## These "Silent Salesmen" Make Bigger, Better Candy Sales

THEY catch the eye of the passing prospect. "Hold on!" they say, "Doesn't this look inviting—don't you want to taste it? Go ahead—buy me and try me—you won't regret it."

Packages produced by us have *real* sales punch. For we know how to give them eye-inviting form and the striking color combinations so essential to sales-making display.

Look over these "Silent Salesmen" which we have designed and printed for other candy makers. They will give you some idea of the kind of work we are producing all the time—the kind of work we are ready to produce for you—at prices made reasonable by the efficiency of plants located at strategic delivery points.

A postal will bring you some facts about ourselves which many makers of packaged products have acted upon with profit.

*Why not dictate that postal now?*



**THE UNITED STATES PRINTING & LITHOGRAPH CO.**

*Color Printing Headquarters*  
130 BEECH STREET, CINCINNATI





# To increase candy sales EASTER AND MOTHERS' DAY—

Capitalize on Mother sentiment. Make people think of remembering Mother with CANDY! We have a number of TESTED, SUCCESSFUL PLANS for getting more business on boxed candies this year.

This proposition is LIVE, right now!  
Write for full details, no obligations incurred.  
Pin the coupon to your letterhead—  
or WIRE, our expense.

**THE NATHAN M. STONE CO.**  
2000-2024 N. Major Avenue CHICAGO

You may  
send me de-  
tails of your  
proposition, no ob-  
ligation incurred.

Firm .....  
Individual .....  
Address .....

To Nathan M. Stone Co., 2000 N. Major Ave., Chicago



CANDY BOX MATS, LACES,  
LAYER CARDS, DIVIDERS, ETC.

*American*  
**Bon Bon  
Cups**

## The Cup Supreme

Once tried  
always used

**AMERICAN LACE PAPER CO.**

LARGEST PRODUCERS OF CANDY CUPS IN AMERICA

**MILWAUKEE, WIS.**

BRANCH OFFICES IN  
PRINCIPAL CITIES

If You Want The Best



## CHOCOLATE

Coatings and Liquors

Order any of these well known brands:

Exquisite Vanilla	Imperator
Vanilla AA	Superior Vanilla
Black Eagle	Matchless
Melba	or Columbia Liquor

These brands are recognized by the leading Confectioners  
from Coast to Coast as the

**STANDARD of QUALITY**

*Samples and Quotations Upon Request*

**The Stollwerck Chocolate Co.**

Factory: Stamford, Connecticut

**NEW YORK CHICAGO LOS ANGELES**

## Let us send you this sample of Black Walnut Flavor

OR ANY OTHER FLAVOR YOU PREFER

Highly concentrated.

Use 1 oz. to 200 lbs.  
Creams.

Does not  
cook out  
readily



## Flavor Values

We have specialized on the  
manufacture of Candy Flavors  
for over 67 years and we are familiar  
with every angle of the confectioner's  
flavor problems, which is the most sub-  
stantial reason why our flavors are of superior  
value. Will you try out a working sample?

**ALEX. FRIES & BRO.**

Makers of Good Candy Flavors for 67 Years  
CINCINNATI, OHIO



"THE QUALITY SHIELD  
OF THE PAPER FIELD"



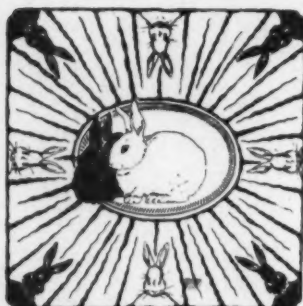
## JANUARY SPECIALS

# EASTER WRAPPERS

in glassine or foil

# DIPPING PAPER

plain or embossed



Let us send you samples and prices



Check the items on which you  
would like samples and prices.

- ☐ Enamel Dipping Paper
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- ☐ Candy Pail Liners and Circles
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- ☐ Glassine and Foil Candy Bar Wrappers
- ☐ Glassine and Candy Bags, Plain and Printed
- ☐ Wattoline Padding
- ☐ Special Embossed Wattoline
- ☐ Embossed Specialties
- ☐ Glassine in Sheets and Rolls
- ☐ White Waxed Papers made in all weights
- ☐ Printed Waxed Papers
- ☐ Colored Waxed Papers
- ☐ Manilla and Fibre Waxed Papers
- ☐ Tissue Paper
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HEADQUARTERS FOR CONFECTIONERS' PAPER SPECIALTIES FOR THIRTY YEARS  
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BROKERS IN

Cocoa Beans  
and  
Cocoa Butter

Phones: Bowling Green 2281, 2:82, 2283

## BAKER SYSTEM REFRIGERATION



NOT to investigate the money  
saving possibilities of the  
Baker Ice Machine is an  
absolute disregard of those pro-  
gressive principles which increase  
both business and profits.

Write today for information.

**BAKER ICE MACHINE CO., INC.**  
OMAHA, NEBRASKA

## The Upressit Cap



Press down with thumb—  
A "Snap" and it is open—  
Another "Snap" and it is re-sealed.

You can't make a woman  
throw away a Upressit  
Sealed Candy Jar—

She always has use for it—and so she forms the habit  
of looking for Upressit whenever she buys candy for  
the children. Upressit has doubled hard candy sales  
for dozens of manufacturers. Why not let it work  
for you, too? Write for samples.

**Upressit Products Corporation**  
Long Island City, N. Y.

# Boxes are more than boxes

Put the same candy in different boxes—and what happens? One box will out-sell the other.

Experience has proven that next in importance to the candy itself is the package—and the package is mighty nearly as important as the candy.

So boxes are more than boxes—boxes speed up sales or slow down sales, depending on the boxes.

The more candy sold the more boxes will be used. You can see where our interest comes in on this.

We want to help you find the particular boxes that will sell the most candy for you. We want to give you the benefit of our experience and our facilities in doing this.

Our department of Design will gladly cooperate; will work up any idea of your own or will originate special sales-bringing packages for you. This service is offered without obligation.

*Boxes are more than boxes—  
Boxes can help you boost sales.*

## F. J. Schleicher Paper Box Co.

ST. LOUIS

CHICAGO

LOS ANGELES

## LA CELLOPHANE

(Reg. U. S. Pat. Off.)

"The peerless package wrapping paper"

Happy  
New Year

FRANZ EULER & CO.

173 LAFAYETTE STREET  
NEW YORK



## Walter Baker & Co.'s Liquor Chocolates and Coatings

Are the Standards of the Trade for Confectioners' Use



*Sweetened and unsweetened; light, medium and dark, whatever the difference of color or flavor, all are absolutely pure, smooth and uniform to work.*

The taste and appearance of confections depend largely upon the coatings.

REG. U. S. PAT. OFF.

Send for Samples and Prices

WALTER BAKER & CO. LTD.

Established 1780

DORCHESTER, MASS.

57 Highest Awards at the Expositions of Europe and America

# The Conley Foil Company

sincerely hopes that every reader of The Candy Manufacturer will be happily busy, successful and prosperous during 1923.

May Conley foil be given the opportunity of helping to increase your business this year.

*Perfect protection  
for perishable  
products*

*Distinctive dress  
for all products*



The Conley Foil Company  
541 West 25<sup>th</sup> Street ~ New York City



**SUPERIOR SEAL SERVICE**

**Famous**  
MAKERS OF BEST GOODS

**THE SWEET SHOP**  
CONFECTIONERS

**Labels and Seals**  
of every description for the  
**Candy Industry**

**Julian Goldcraft Seals**  
White embossed seals  
Gold bronze on colored stock  
Stock Seals  
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Address Labels  
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**WRITE FOR SAMPLES & PRICES**

**Milwaukee Label & Seal Co.**  
OVER A MILLION LABELS A DAY  
161-171 MICHIGAN ST. MILWAUKEE, WIS.

## Apply this Test to Citrus Flavors

THERE is only one gauge by which the value of any flavor can be judged accurately—the results it brings about in your products.

**CXC**  
**LEMON**  
**ORANGE**  
**POMELO**  
(Grapefruit)  
**LIMES**

Try any CXC citrus fruit concentrate. You will find that any confection flavored with it possesses all the delicious, delicate flavor of the natural fresh fruit. The reason for this is that in our original and unique mechanical process for preparing true terpenless concentrates no heat is used.

Are you open to conviction? Then write today for the free samples which will prove the great value of these exceptionally fine flavors.

**FOOTE & JENKS**

Expert Flavor Specialists  
JACKSON, MICHIGAN

*Purity in acid  
for confectionery*

# LACTART

**A highly refined, pure  
edible lactic acid**

Inhibits fermentation.  
Provides that desired bland tartness without the undesirable sourness or acidity.  
Blends perfectly with all flavors.  
Especially adapted for use with invert sugar.  
Lactart is in liquid form, ready for instant use.  
It is constant and uniform in purity and strength.  
Write for our latest booklet on Lactart and free sample.

**WAMESIT CHEMICAL CO.**

32 Shattuck St.

Lowell, Mass.

For That Perfect Flavor  
In Candy Use

# Mapleine

Candy manufacturers throughout the country pronounce Mapleine unsurpassed as a maple flavor.

The flavor Mapleine brings out in the finished candy is perfect.

Mapleine will not fade nor deteriorate in the manufactured goods; its flavor remains true and unchanged months after packing—an important point for the long-distance shipper to consider.

Mapleine will prove just as satisfactory in your candy—a trial will convince you.



*\$3.00 brings a quart bottle for trial*

**Crescent Manufacturing Co.**

311 Occidental Avenue  
SEATTLE, WASH.

M-973



Our "WHITE BIRD" Design  
New Candy Box

Decorated in SEVEN Beautiful Colors.

Two Sizes: No. 1—1 lb. to 1½ lbs. No. 2—2 lbs. to 3 lbs.



Orders Accepted in Lots of  
100 or Over.

Prices Attractive, too  
Ask Us.

**NATIONAL CAN COMPANY**

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Our Diamond A cane sugar for confectioners is especially made to stand very high temperatures and to produce hard candies with an unusually beautiful, shining appearance. It is also supreme for making fondants and for ready mixing with other ingredients.

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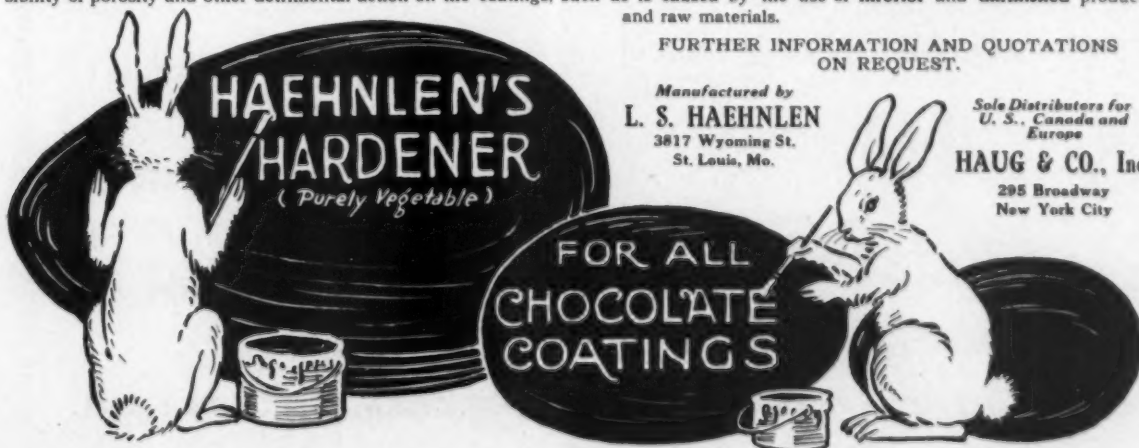
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The ORIGINATORS  
of  
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**STRENGTH, QUALITY AND PURITY**  
THE SAME AS ALWAYS

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**Dark Glace-line** For giving a high gloss to all Chocolate Coated or Dipped Easter Eggs, Rabbits, Etc.

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**Henry H. Ottens Manufacturing Co., Inc.**

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**"Trim It With Ribbons"**

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Pure Dye Satin**

Pattern 240 has stood the test and made good with every box or candy manufacturer who has used it.

Made in widths 2-3-5-7-9-12-16 and all the colors necessary to put the "final touch" to your package.

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*Specialists in the Chemistry of Chocolate and Cocoa Products  
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*Most reliable gelatine  
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Strength, purity and uniformity guaranteed

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## Highest Grade Shelled Nuts

1885—IMPORTERS—1923

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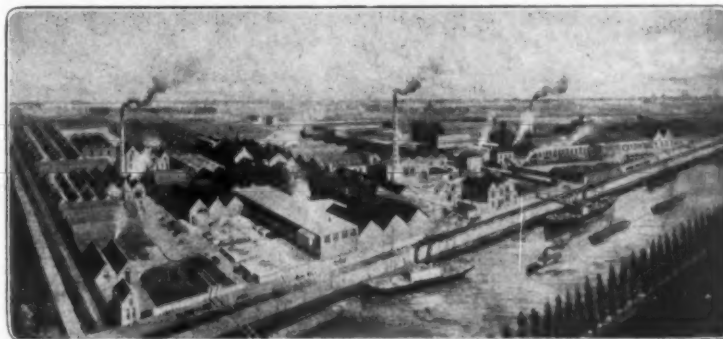
Not the Cheapest — Not the Dearest — BUT THE BEST!

Purity, Strength and Uniformity Guaranteed

Established 1857

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COCOA  
BUTTER  
EGG  
ALBUMEN  
GLACÉ  
FRUITS  
MILK  
POWDER  
MAPLE  
SUGAR



Plant in Belgium where PURE FOOD GELATINE is manufactured

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CHERRIES  
GUM  
ARABIC  
CEYLON  
COCOANUT  
CANNED  
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JAPANESE  
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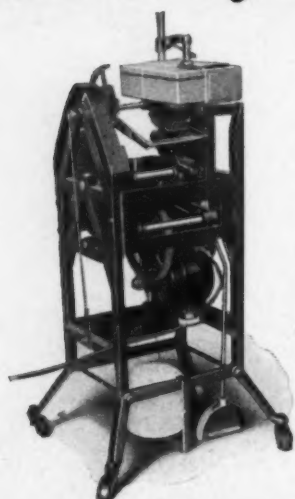
Cocoa Beans      Cocoa Butter

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—•—

New York City

# Bunn Tying Machine Replaced 8 Girls



Bunn Box Tying Machine has replaced eight girls in one of the foremost candy plants in America—  
(Name on request.)

Think of it—eight girls averaging fifteen dollars a week, one hundred and twenty dollars a week saved fifty-two times each year. Such an enormous saving is worthy of your careful consideration.

The Bunn Box Tying Machine ties the box both ways in one operation making a very tight tie and only one knot; no adjustments being necessary for the different sizes. The box is automatically ejected from the machine.

*May we install a Bunn Package Tying Machine in your plant and demonstrate what it can save you. No obligation if it fails to satisfy.*

*Let us send you our literature and prices.*

## B. H. Bunn Co.

7325-31 Vincennes Ave.

CHICAGO

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# Apricot

The palate-pleasing tang of properly cooked apricot-flavored candy brings that "I'll take another" feeling so profitable to the confectioner.

In the splendidly equipped laboratories of

## The FRIES & FRIES CO.

Special work on apricot flavor has developed something so good that—we want you to try it, and to make yourself the judge.



*Write us on your letterhead  
for a generous free working  
sample*



## CLASSIFIED ADVERTISING

Help Wanted, Situations Wanted, Salesmen Wanted, Machinery and Equipment Wanted and For Sale, Etc., Etc.

*Remember—this is the manufacturers' own magazine devoted to the interests of the executive, the purchasing and production departments of a candy and chocolate factory. Therefore this is the most logical medium through which to make known your wants regarding the sale or purchase of machinery and equipment, help wanted, or positions wanted, etc. Closing date for this department, first of month.*

### MACHINERY FOR SALE

**FOR SALE—ENROBER, NAT'L** Equip., 15 inch; Chocolate Melting Kettles, Nat'l Equip., 2000 lb.; Greer Chocolate Cooling System, Bar Cooling Machine with shaking table, Depositor and Nut attachment, Nat'l Equip.; Weiskopf Bar Wrapping Machine, Jabez Burns Cocoa Bean Roaster, Bausman Disc Refiner, Shraft System Complete, Enrober Trays, Shraft Trays, Triple Mill, Carey Type; Racine Caramel Cutter, Steel Mogul, Nat'l Equip.; Kiss Wrapping Machine, Model K; Heilman Coco Bon Bon Machine, York Batch Roller with motor, Savage Marshmallow Beater, Day Cream and Dough Mixers, Steam Jacket Kettles; slightly used D. C. Crocker Wheeler Motors, 1/12 to 35 H. P. Full particulars and prices will be sent upon request. Address L275, c/o The Candy Manufacturer.

**FOR SALE—REFRIGERATOR,** "Butcher Boy." Size, 11 in. wide, 22 in. long and 8 in. high. Sectional. Excellent for hardening room. Very light and sanitary. Standard Candy Company, 411 N. Wells St., Chicago, Ill. Dearborn 1453.

**WE OFFER FOR SALE—THE FOLLOWING** equipment made by National Equipment Company: 1 Type T2 Woodburn Sugar Mill; 2 Four Division Conges. capacity 1,600 to 1,800 pounds; 1 Eight Division Conges. capacity 3,200 to 3,600 pounds; 1 Paste Molding Machine and Shaking Table, Type J-X1. The following equipment made by J. M. Lehmann Company: 1 No. 97R Cocoa Dust Cleaning Machine; 2 No. 134 Mixing Machines; 1 No. 200S Longitudinal Grinding Machine; 4 No. 200 Longitudinal Grinding Machines; 1 No. 98 Cocoa Pulverizer; 2 Any Package Wrapping Machines for wrapping in foil or wax paper and label 5c Almond Bars. The following equipment made by Package Machinery Company: 3 Wrapping Machines for wrapping in foil or wax paper and label 5c Almond Bars; 1 Wrapping Machine for wrapping in foil or wax paper and label 10c Almond Bars; 1 Wrapping Machine for wrapping in foil or wax paper and label 5c Flat Chocolate Cakes or Bars. All equipment in first-class condition, some of it used very little. An exceptional opportunity to acquire valuable machinery at bargain prices. Address M279, c/o The Candy Manufacturer.

### MACHINERY FOR SALE—Cont.

**EQUIPMENT FOR SALE—1 RACINE** Depositor, \$350.00; 1 Electric Revolving Packing Table, \$200.00; 1 Rotary Electric Scrubbing Machine, \$100.00; 1 Mills Sizing Machine, \$45.00; used Sample Cases and one Sample Trunk; 1 Small Power Egg Beater, \$15.00; 1 Marshmallow Barrel Beater, \$30.00; 1 Lady Mint Kiss Cutter, \$15.00; 1 Humbug Kiss Cutter, \$15.00; 1 Hand Butter Cup Cutter, \$12.50; 1 Hand Waffle Cutter, \$10.00. Gurley Candy Company.

**FOR SALE—3 CAREY CACAO BUTTER** Presses; 3 Lehmann Cacao Butter Presses; 1 Springfield 3-Roll Refiner; 1 5-Roll Steel Refiner, 16 x 32; 1 Lehmann Cocoa Pulverizer, 98; 1 Lehmann Cracker-Fanner, large; 1 Jabez-Burns Cocoa Bean Cleaner, 1 Springfield Cocoa Bolter; 1 Racine Depositor; 1 Werner Depositor, new; 2 Wood Moguls, complete, A-1; 6 Mogul Depositor Pumps; 1 Springfield Enrober, std. size; 2 Kihlgren systems for stringing; 2 Fritz Coating Machines, complete; 1 Walter Basket Dipping Machine; 2 Springfield Continuous Cookers; 2 Simplex Gas Cookers, extra kettles; 1 Simplex Steam Cooker, almost new; 1 Baker Steam Sugar Cooker, cheap; 1 Hohberger Cream Cooler and Beater; 2 Werner Cream Coolers, new; 1 Racine M. M. Beater, jacketed; 2 Racine Continuous Cutters; 1 Automatic Plastic Machine; 1 Mills Cooling Table, 3 x 6; 2 Stokes Mint Tablet Machines, D; 1 Saxmayer Bundle Tyer; 3 Gas Engines (will exchange); Mills Bon Bon Machines, Buttercup Cutters, Blowers, Enrober, Belts, Gas Furnaces. When in New York, do not fail to visit our warehouse. All machinery kept in stock is rebuilt. Our guarantee provides for the return of machines that are not satisfactory in every respect. Time payments. Candy & Chocolate Special Machine Company, Inc., 39 Cortland Street, New York City.

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**FILLED GOODS PLASTIC PRESS,** automatic or otherwise, wanted; also Brach Buttercup and Waffle Machine. Address P. O. Box 95, Station "C," Montreal.

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**MACHINERY FOR SALE. SUPERINTENDENTS** will notice this new marvel depositor for Maraschino cherries and nuts is filling a long-felt want for the increasing demand for Maraschino cherries; also strawberries, pineapple and other cast-centers for chocolate bonbons. This machine handles them in a perfect, sanitary manner and without extra power. With it one girl can deposit 50,000 cherries in one hour, or it performs the work of ten girls. It is the only machine of its kind on the market and will pay for itself in one month. The machine is made to fit the Mogul Standard size starchboard, outside measure 14 1/4 x 32 inches; twenty droppers on caster. Price and description on application; also testimonials. Patented and manufactured by Theodore Bosshard, 385 Cornelia Street, Brooklyn, N. Y.

### HELP WANTED

**WANTED—A COMPETENT, PRACTICAL** and energetic middle-aged superintendent for a central New York candy factory. Must be a man of experience, strictly honest, acceptable references, able not only to know a good product, but to tell others how to produce it and see that they do it, and to so handle his help as to maintain discipline and produce paying results from pay roll expenditures. Correspondence confidential. References, salary to start, present position and reason for leaving, and all possible details desired in first letter. Address M278, c/o The Candy Manufacturer.

**HELP WANTED—ONE EXPERIENCED** cream, gum and marshmallow man. Can offer such a man good, steady position. Apply Wm. H. Luden, Inc., Reading, Pa.

**SALESMEN WANTED—MANUFACTURER** of very high grade hard and filled candy, bulk and jars, desires salesman to sell to wholesalers in middle West and South. References required. Address M277, c/o The Candy Manufacturer.

**SALESMAN WANTED BY AN OLD** and well established concern, to call on the candy manufacturers. Preferably one who has called on this trade and has had experience demonstrating candy manufacturing. Salary basis. Address M276, c/o The Candy Manufacturer.



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Marshmallow Gelatine**

*Write us for complete information  
and samples*



We are producing edible Gelatine,  
especially manufactured for  
marshmallow work and as free  
from all kinds of BACTERIA as  
can be made

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**BEGINNING** January 1st, 1923, on request we will *send with each shipment* of Crystal Marshmallow Gelatine a Certificate of Bacteriological Analysis, made by a disinterested Bio-Chemical Laboratory, giving results of their tests on the following kinds of bacteria:

1. Bacteria [per gram].
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3. Lactose Fermenting Organisms.
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**Good  
Packing  
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## *- to the Journey's End*

By rail or boat, by truck or wagon, through rain and storm, your goods travel a long, hard way from your factory to the retail store.

No matter how often good wood boxes are loaded and unloaded, handled with hooks, piled under heavy freight, dropped from car to platform and from truck to the ground, they guard your goods from damage.

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*Backed by the National Association of Box Manufacturers*

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NEW ENGLAND: 1013 SCOLLAY BLDG., BOSTON, MASS.

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Purity should be every producer's first thought and it certainly was *ours*, when we began making gelatines many years ago.

And in all these years there has never been a just complaint about our products.

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That's our slogan.

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and satisfy yourself fully as to *quality*,  
*purity*, *uniformity* and *right price*.



**Milligan & Higgins Gelatine Co.**

Established 1868

**222-224 Front Street  
NEW YORK CITY**

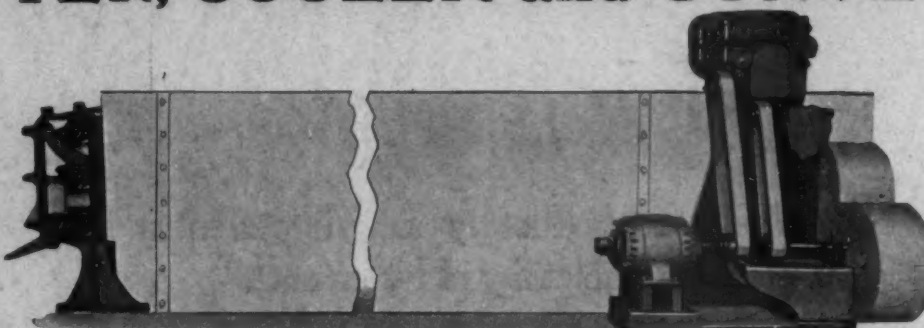


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# The BRACH

## CUTTER, COOLER and CONVEYOR

The Brach Continuous Cutter cuts pieces in sizes varying from a tiny baby kiss to pieces one and one-half inches square—without ANY CHANGE OF MACHINERY.



I can furnish the BRACH Cooler and Conveyor separate—or connected to the BRACH Continuous worm gear drive Cutter, with a one horsepower motor, as illustrated—ready for operation.



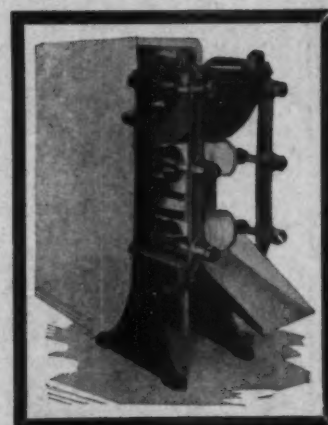
"Feed End" of Brach Continuous Cutter fitted on Cooler and Conveyor, showing blower of Cooler and Conveyor.

For the keen Business Man the best is none to good—when you install the

### Brach Hard Candy Equipment

you can be assured you have the best—backed up by our broad

### GUARANTEE



The "Delivery End" of the Brach Cooler and Conveyor—note the three belts which operate at different speeds to permit candy to cool thoroughly.

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The BRACH CONTINUOUS CUTTER comes in two styles, the belt drive model and the worm gear drive model—both very efficient and highly productive, with a capacity of four thousand pounds of candy per day (some of our customers have gone us one better and claim to have turned out seven thousand pounds in a 10-hour day). If desired without the Cooling attachment, it comes mounted on a firm iron stand, or can be set right on your working table.

The BRACH COOLER AND CONVEYOR is but 17 lineal feet in length, yet gives the candy a travel of approximately 525 lineal feet when used with the Brach Cutter, which cuts the candy off completely. The top conveyor belt runs five times slower than the knives on the cutter, the next belt ten times slower and lower belt twenty times slower, which gives this remarkable cooling capacity against goods cut with a web which would necessitate the belts running slightly faster than the cutting knives.



The New Way (The Brach Way) — Contented Labor, minimum space, maximum output.

### 30 Days Free Trial (in U. S. only)

Arrange to have this Equipment sent to you on 30 days FREE TRIAL and prove to your own satisfaction its labor-saving, profit-making qualities.

Write for prices

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Confectionery Machinery

215 W. OHIO STREET

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The Old Way — Discontented, hard worked Labor, minimum production with maximum overhead.

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